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ABSTRACT

An exploratory study was designed to determine whether the use of a new, small group technique adds significantly to the level of training in early childhood education. Two groups of five student teachers learned the technique and were then evaluated. The evaluation procedure was designed to measure changes in their educational objectives, their teaching techniques, and their teaching styles. Six types of data were collected for evaluation: 1) a final paper written by the students, 2) adult Grouptalk sessions, 3) ratings of Grouptalk leadership based on tape recordings, 4) student problems Q-sort, 5) teacher ratings, and 6) student teacher paragraph completion test. Two sources of quantitative data yielded inconclusive results, partly because the ratings of performance were obtained before the experimental training had been completed, and partly because of the questionable reliability of the measurements. The small size of the sample justified placing major emphasis on the analysis of the residual data, including the responses to a projective test, and the final papers. The analysis indicated that the experimental groups increased their self-understanding, gained a more mature perspective on their role, and became more sensitive observers of the children's thinking and needs. It is recommended that Grouptalk training be added to the curriculum of teacher training institutions. (MBM)

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Evaluation of a Small Group Technique as a Teacher Training Instrument

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April 1970

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PREFACE

The numerous approaches followed today to improve teacher training are harbingers to the increased vitality of our educational system. This paper reports an exploratory study undertaken to determine whether a new small group technique, "Grouptalk," adds significantly to the already high level of student teacher training offered by a college which specializes in early education and has a strong liberal arts program. Wheelock College shares the goals of modern educators who hope to prepare today's children for the world of tomorrow, and has tailored its curriculum to prepare teachers with skills needed in addition to those of the "traditional" teacher. Emphasis is placed on training the teacher to understand how children think and to comprehend the complex relationships between personality and learning, and on helping individuals develop their unique potentialities in an informal group setting. The college recognizes the greater need for maturity in the beginning teacher in an unstructured teaching environment than was necessary for the new teacher in the more rigid, traditional classroom. The total program for preparing teachers at Wheelock College is oriented toward achieving these goals.

The willingness of Dr. Margaret H. Merry, President of Wheelock College, to sponsor my research project in harmony with this educational philosophy, is greatly appreciated.

It is a pleasure to acknowledge the contributions to the project made by a number of colleagues. I am most indebted to Henry H. Atkins, who was Principal of the Underwood Elementary School in Newton, Massachusetts, at the time plans were made with Wheelock College to undertake this cooperative study. He did much more than initiate the contact and help think through the detailed proposals for a grant. In the early days of my research on Grouptalk with children at the Underwood School he was intrigued with the potential value of having teachers learn the technique. He urged me to offer Grouptalk technique training to staff members and student teachers working at Underwood. Their cooperation then helped channel its further development. His enthusiasm for the results was contagious. Without it, this project would have never materialized.

I would also like to thank Mrs. Carmella D. Nadeau, Principal of the Underwood Elementary School at the time of the experimental study, and those members of the staff who gave so generously of their time: Miss Sally E. Clark, Mrs. Ruth K. Davies, Miss Kathryn A. DeSano, Mrs. Louise J. Hauser, Mrs. Bessie B. Lyman, Mrs. Kristin L. Oldenburgh, Miss Marilyn Flanagan, Miss Katharine Sawyer, Miss Agnes L. Scully and Mrs. Susan W. Tregay. I am also indebted to the Principals of the Davis, Cabot and Ward Elementary Schools in Newton, Miss Henrietta Brebia, Mrs. Mary B. Winslow and Miss Madeline E. Bartell, and the following teachers at these schools for their willingness to supervise the students in the control groups and participate in the evaluation procedure: Mrs. Laura G. Avery, Mrs. Bonnie Bivins,

Miss Marcia J. Baur, Mrs. Mabel D. Ellis, Miss Barbara Kagan, Miss Aileen A. Lynch, Miss Dorothy A. Mattson, Miss Rose V. Mroszczyk and Mrs. Sharyn L. Weiner.

I am deeply grateful to Dr. Alma Bent, Chairman of the Teacher Education Department of Wheelock College, for her administrative help in carrying out the teacher training project. She generously made room for the study in her own education course and took the major responsibility for all arrangements involving the participating Wheelock students and cooperating teachers in the Newton Public School system. Her evaluations of the student teachers contributed substantially to the project because of her background of many years' experience in the supervision of student teachers and her extensive contact with the girls in both the experimental and control groups. I also want to thank all the student teachers who participated in the project for their essential and individual contributions. Mrs. Betty Lou Marple, my husband, Dr. Fred L. Whipple, and Mrs. Janet Moat have each made valuable editorial suggestions.

I. INTRODUCTION

A. SUMMARY

An exploratory study in the field of teacher training was designed to determine whether the use of a new small group technique adds significantly to the already high level of training offered by a college which specializes in early childhood education. While they were apprentices in the Underwood Elementary School in Newton, Massachusetts, two groups of five Wheelock College student teachers each learned a new technique called "Grouptalk," a specific type of small group discussion which I had previously devised as a tool to help increase thinking, communication and social skills. They learned it by participating in seven adult Grouptalks, reading my instruction manual, observing me lead a discussion with a small group of second graders, leading the same group of children in six Grouptalk sessions, analyzing the taped sessions in conferences with me, and, finally, by writing a report. The contribution of this very brief training program to the students' preparation as teachers was evaluated in six ways, four of them with the help of matched control groups, classmates in the same educational curriculum class, apprenticed at other elementary schools in Newton.

Two sources of quantitative data yield inconclusive results, in part because the cooperating teachers' and supervisor's ratings on performance, actual and potential, were obtained before the experimental training had been completed, in part because of the questionable reliability of the measurements. The small size of the sample warrants placing major emphasis on the analysis of the residual data, which includes the students' responses to a projective test and their final papers.

Analysis of these data indicate gains from Grouptalk training in the directions anticipated. The experimental groups increased their self-understanding and gained a more mature perspective regarding their role as teachers by examining in depth the nature and limits of effective authority. They also became more sensitive observers of children's thinking and needs. In comparison with the control groups, their understanding of how second graders learn, especially from their peers, became more concrete and meaningful. Above all, Grouptalk increased their familiarity with the complexities and importance of group dynamics, the social factors that affect the structure of the learning situation, and gave them valuable practice in using teaching techniques that can help establish group control without inhibiting self-expression. With a few notable exceptions, the individual study projects of the control groups give little evidence of specifically contributing toward their development as teachers in the areas under consideration.

The basic recommendation emerging from the exploratory study — that Grouptalk training should be added to the curriculum of teachers training institutions — is supported by the student teachers' unanimous enthusiastic response to the experimental program.

Two additional conclusions are: (1) A projective test, such as the Student Teacher Incomplete Paragraph Test, is potentially useful in predicting some aspects of teaching effectiveness and (2) Previous estimates of the pedagogical value of Grouptalk for young children, thus of its value in the elementary grade curriculum, are supported. However, experience with the problems involved in introducing Grouptalk into the elementary grades during the period of a student teacher's apprenticeship suggests that alternative ways of achieving this goal would be preferable.

Further exploration is thus indicated for three separate problems: (1) What is the most effective way to introduce Grouptalk into the curriculum of a teacher training institution?, (2) What alternatives are better than using apprentice student teachers as leaders in order to make Grouptalk available for the lower elementary school grades? and (3) How can the Student Teacher Paragraph Completion Test be improved as a diagnostic instrument?

B. PROBLEMS UNDER CONSIDERATION

This report describes an experimental addition to the teacher education curriculum at Wheelock College – the instruction of student teachers in the use of a new pedagogical small-group technique, Grouptalk, during their apprenticeship in the primary grades of an elementary school – and explores its effectiveness in terms of the teacher training objectives of the College.* The evaluation includes an assessment of the value of teaching student teachers Grouptalk technique, of the specific method used to teach it, and of giving this training during a student teacher's apprenticeship. The study is also designed to shed some incidental light on the contributions that Grouptalk makes to second graders. Finally, it introduces the possibility of developing a new story completion projective test into a tool for predicting aspects of teacher excellence.

1. Teacher Training Programs. The many contributions to the broad field of preparation for teaching may, for convenience, be categorized roughly as concerned with: (1) noninstructional skills, such as order and routine, (2) knowledge of the content of a specific discipline, American history or mathematics, for example, and (3) the more general instructional knowledge and skills associated with the role of teacher. It is with this last type as applied to the primary grades that this exploratory study deals.

Educators working in this almost limitless area of broad preparation for teaching young children have emphasized the value of a large number of different types of training. There is general agreement on the importance of increasing the prospective teacher's understanding of child development, of the range of individual differences, and of the ways in which an individual can be helped to learn. More recent and controversial developments include the belief that the beginning teacher should also know something about group process and emotional education (Rogers, 1966). A few teacher training institutions include T-Group training in their curriculum with the aim of increasing the student teacher's familiarity with group behavior, his sensitivity to others, and his self-insight and maturity. For example, the Institute for Advanced Study in Rational Psychotherapy now runs a laboratory school where its students can learn to apply the principles of rational-emotive therapy to themselves and their young charges (IASRP Newsletter, 1970). Equally new but more widely accepted than this emphasis on leadership skills is the use of discussion groups as a method of instruction in teacher preparation programs. Arthur W. Combs (1965) advocates including "learning group" discussions, as opposed to "decision groups" and devotes several pages in his book, The Professional Education of Teachers, to discussion techniques.

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*The terms 'Wheelock students', 'students' and 'student teachers' will be used interchangeably and be differentiated from the terms 'children' and 'pupils', which are equivalent. 'Cooperating teachers' and 'teachers' have the same meaning.

Student teaching experience combined with academic courses is standard procedure in teacher education. Purpel (1967) lists four general functions of the student teaching: (1) orientation, or socialization, to the world of the school, (2) providing an opportunity to begin to develop an autonomous teaching style, (3) giving the trainee an insight into the professional requirements of a teacher, and (4) operating as a laboratory where the student confronts the theoretical aspects of teaching learned in courses with data accumulated through personal experience. These functions often are not fulfilled in current training programs. Sorenson (1967) expresses the most crucial defect as a failure:

> to provide the prospective teacher with a theoretical framework for use in planning and evaluating his own instructional activities. The entire emphasis seems to be on the learning of routines for getting through the day rather than on the analysis of the reasons for or the effectiveness of these routines. (p. 177)

He suggests the need for radical change:

> Much more attention needs to be given to the teaching of a theoretical framework and to showing how that framework can be useful in guiding the day-to-day activities of the teacher. (p. 177)

A means of correcting the theory must also be taught. Sorenson hopes that the steps taken to achieve this goal will:

> reduce the anxiety and even hostility which the data suggest many student teachers experience in practice teaching, and so increase the effectiveness of teacher-training programs. (p. 177)

Training in Grouptalk technique bears upon all of these aspects of a broad preparation for teaching. After a brief description of Grouptalk, the rationale will be given for adding it experimentally to the student teaching program of a small number of Wheelock College students.

2. Grouptalk Technique Grouptalk is a specific type of small group discussion which I devised in 1965 and described in The Grouptalk (1967), a publication now out of print, and updated in unpublished mimeographed form (Whipple, 1969). The general definition is as follows:

> Grouptalk is a taped conversation in which a leader helps a small group of people follow rules in talking together to try to answer a discussion question. (1969, p. 2)

This general definition delineates the function of the small group (the members talk together to try to answer a discussion question), the function of the leader who is not a group member (he helps them talk together), and the conditions under which the group operates (they follow rules). Instruction in Grouptalk participation and leadership makes explicit with practice the techniques the leader uses to help the group talk together and the nature of the rules it must follow. There are three categories of rules: starting, discussion, and ending rules. The starting rules emphasize the importance of clarifying the meaning of the discussion question. Discussion rules seek to elicit active and relevant participation from all members. The ending rules pertain to summarizing the discussion and evaluating its quality while listening to a taped recording of it. Both the formulation of the rules and the manner of presenting them vary according to the age level of the participants. Grouptalk is appropriate for all ages beginning at the second grade level.

Regardless of the age of the participants, the leader's function remains the same. He facilitates the group discussion, while carefully refraining from giving his own answers to the discussion question. The leader concentrates his remarks on the process rather than on the content of the discussion. Grouptalk is not a vehicle for communicating information from leader to participants. Thus, when used in a school setting, it prevents the teacher from assuming the role of information expert. The Grouptalk session teaches children how to think, not what to think. It helps them to become more effective participants in a small group discussion. It increases their self-confidence and the quality of their verbal self-expression.

How is the use of Grouptalk as a teacher training instrument related to current activities elsewhere that stress small group discussions? There is considerable overlap with T-Group training in philosophy and goal orientation — Grouptalk also increases sensitivity — but major differences are basic. Grouptalk leaders structure the group's interactions, help the participants follow rules, whereas T-Group leaders do not. This makes for important differences in the kind of learning that takes place in the two types of small groups.

Grouptalk sessions also bear some resemblance to highly structured small group discussions, developed in California for primary school children. This program calls for structured group discussions for moral ideas starting with kindergarteners. In many ways the goals are similar to those of Grouptalk. In addition to the sensitivization and awareness of group dynamics, the student teacher learns about children's moral growth and how to influence it. But both the goal and technique of guiding moral development are quite different from Grouptalk. Furthermore, it lacks Grouptalk's emphasis on cognitive processes: specifically, learning how to define terms, to maintain relevance, and to summarize.

3. Rationale for teaching Grouptalk What would student teachers gain from learning this new technique? Instruction in Grouptalk technique, we anticipated, might make a significant contribution to the training of Wheelock College student teachers during their apprenticeship in the second and fourth areas listed by Purpel (1967) referred to above. First, it might help the students begin to develop an autonomous teaching style in a situation where 'good teaching' usually means 'teaching the way the cooperating teacher wants you to teach'. Being able to progress towards establishing their own style would add to their maturity and self-confidence in their role as teachers. Secondly, it might also help focus attention on the way in which educational theory is related to the day-to-day activities of the teacher. By increasing their understanding of how children feel, think, interact in small groups, of how these interactions affect learning, and of how they as leaders are involved in the group dynamics, Grouptalk would solidify the students' educational philosophy and make the application of theory more meaningful in the classroom.

Expectations that these results would come about were based partly on the nature of Grouptalk itself, partly on the method that would be used to train the students in the technique, but also on my previous experience in teaching students Grouptalk technique.

a. Expectations Based on Nature of Grouptalk. — The wide range of questions from which a particular one is selected for a Grouptalk discussion is an important factor in accounting for the flexibility of the technique as a pedagogical tool, for its appropriateness over an enormous age range, and also for the variety of types of gains to be made from a given session. Questions can be simple or complex, realistic or fanciful: "What kind of flower would you like to be?" (second grade), "What if there were no communication between Southeast Asis and the United States?" (fourth grade), "What contributes to a favorable student teaching experience?" (student teachers), "Has the United States reached the limit of its ability to educate its children without population control?" (staff). The Grouptalk session is particularly well suited to convey to an observant leader how children of a given age learn, think, and interact in small groups because the basic structure of Grouptalk restrains the leader from entering into the discussion of content. The teacher is constrained to listen to children's uncensored communications. He is not supposed to interrupt or direct the flow of ideas. As a consequence of being in this position, the leader has an unusual opportunity to increase, through concrete experience, his understanding of children and test the appropriateness of his philosophy of education. Grouptalk encourages children to be creative and to take responsibility for the direction of their discussions. For this reason, observation of changes in their behavior over a series of sessions should support the view that children's learning is most effective when self-directed. At the same time, the requirement that the leader help the group maintain the discussion according to the rules of Grouptalk teaches the leader a great deal about group dynamics and techniques of group leadership. It also highlights the relationship between his actions as leader and the children's learning.

b. Expectations Based on Training Technique. — The student teachers would learn Grouptalk technique by following a procedure which we hoped would also contribute to their knowledge and growth as individuals. Before observing and leading children's sessions, they would participate in adult sessions geared to call attention to how they themselves had learned. The discussion questions used in the subsequent series of adult Grouptalk sessions would also be chosen to enhance the student teachers' self-insight and knowledge of children. The same rationale applies here as in the training of T-Group leaders and psychoanalysts, even though Grouptalk technique is considerably simpler than either of these: future practitioners must become participants first because the personal learning and growth which can take place through active exposure to the technique are necessary ingredients in the effective use of it.

Two additional features of the Grouptalk training procedure were expected to contribute to its educational significance: (1) opportunities to observe and discuss procedures followed by a trained Grouptalk leader, and (2) individual conferences which would follow as soon as possible the session that had been led to provide feedback on the student's own leadership performance. The pedagogical value of this type of critical appraisal has been experimentally documented in the studies of Dwight W. Allen, et al. (1966) on the effects of feedback and practice on the acquisition of a teaching strategy, and in the studies of Michael E. J. Orme, et al. (1966) on the effects of modeling and feedback. By the end of the term, if the Wheelock students thought they had learned how to handle small groups more effectively, an increase in their self-confidence in the teaching role would be the natural outcome of the skill they felt they had acquired in leading Grouptalk sessions. An increased sense of competence due to actual experience would match the increase in understanding that observation alone might have yielded. The training would be an example of the episode teaching method recommended by Lundy and Hale (1965).

c. Previous Experience in Student Teacher Training. — My earlier work in training student teachers to lead Grouptalks was encouraging. During the first part of the academic year, 1966-67, two Wheelock students under my direction conducted a series of twenty Grouptalks with the second graders in their classrooms. In the spring term of that year two students from another college working at the fourth grade level also learned how to become Grouptalk leaders. Their college supervisors, the staff at the Underwood School and the student teachers themselves felt that the technique had enabled them to gain rapidly new insights about themselves, the children, and their relationship to the children. Their adult Grouptalk sessions provide opportunities for growth: when the student teachers analyzed their student teaching experience they came to the decision that their master teachers had given them adequate supervision, that it had been their own insecurities which led them to unrealistic expectations that the master teachers would provide far more specific type of guidance. Differentiating their own concerns from the children's also helped make the student teachers feel more a part of the adult world and strengthened their self-confidence in their authority roles. Listening to second graders discuss the question, "Why do we need families?" made it clear to these college seniors that the children's preoccupations with the family were drastically different from their own. Other Grouptalks led to further insights which the student teachers could relate to the classroom.

Experienced teachers also led Grouptalk sessions. They commented that the sessions helped them understand particular children better than had been possible in the classroom situation, even though their policy was to make frequent use of small group and individual teaching. Children, freed by the rules of Grouptalk from the constraint of trying to give the "correct" answer and encouraged to communicate with the other children in the group rather than with the teacher, had expressed themselves in unexpected ways. Experienced, sensitive teachers who led Grouptalk sessions saw emerge abilities and facets of personality of which they had previously been unaware, and felt they could put this knowledge to use in the classroom.

C. METHODS

1. Selection of Subjects The exploratory study was tailored to fit into the current teacher preparation program of the College. During the sophomore year Wheelock students observe young children in either a classroom or other institution in which care of young children is involved. For ten weeks in the last part of the junior year, then again in the first semester of the senior year, the students are given more responsibility as apprentice teachers. Usually they undertake an independent study. There are conferences at frequent intervals with the cooperating teacher and the supervisor from the college to help the student teacher evaluate her classroom experience. In addition, the supervisor holds weekly seminars with her dozen or so students to take up general and specific aspects of the curriculum and to supplement what is being learned in the classroom.

Dr. Alma Bent generously agreed to incorporate the exploratory teacher training project into her unit of this educational curriculum for two successive terms. This meant a total sample of twenty students. Half of the ten student teachers in each group she supervised, or ten in all, learned Grouptalk technique during the time they were apprentices in the first, second or third grade at the Underwood Elementary School in Newton.* The control groups, the other five members in each of

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*The decision to provide the Grouptalk training at this particular school was made because the technique had been developed there. Both the administration and the staff were familiar with Grouptalk and actively encouraged cooperation in a research project which would involve children's participation in Grouptalk sessions led by Wheelock College students.

Dr. Bent's two seminars, were apprenticed in grades one through three at other elementary schools in Newton having a comparable educational philosophy. This arrangement for the control groups meant they had no contact with Grouptalk — their classmates were strictly enjoined to silence and kept it — but they shared the same supervisor. They were also asked to undertake an individual study that involved working with a small group of children. Hence, in other respects, their teacher training experience was comparable. The students teachers do not represent a random selection even from the Wheelock College population. Both groups of ten students supervised by Dr. Bent were mostly girls who had elected to work in the primary grades in Newton. At the time of starting their preference they knew nothing about a research project, but, when told about it, all agreed to participate. Although assignment to the experimental and control groups was largely on the basis of ease in arranging transportation, strong student preference for a specific school assignment was honored.

To provide some check on the comparability of our experimental and control groups, I collected demographic data from each of the students on a standard form (cf., Appendix I). Additional means of assessing the equivalence of the experimental and control groups are provided by the pre-tests, described below, which formed the baseline for estimates of change during the experimental period. These data indicate that the two control groups were slightly superior in teaching competence to the two experimental groups at the beginning of the term.

2. Grouptalk Training Procedure The student teachers' first exposure to Grouptalk consisted of two adult sessions. The manner in which I initiated them suggested the model to be followed with the second graders, not the model appropriate for use with adult groups. Both the teaching technique and the discussion topic for the second session ("How are the rules of Grouptalk learned?") were intended to encourage the student teachers to think about how children's learning might be compared with their own.

Following the first two sessions, the student teachers read my 59 page mimeographed manual (Whipple, 1969), which describes Grouptalk, with particular emphasis on its use in the primary grades. The original plan — to have them listen next to tapes of previous second grade Grouptalk sessions — was abandaned because of scheduling difficulties. Instead, each student teacher's first exposure to a children's session was when she watched me lead her group (four or five children) in their first Grouptalk session. Because Grouptalk is not appropriate for children in the first grade, and a large percentage of the children in all of the third grades at the Underwood School had participated in Grouptalk sessions the previous year, we formed groups with all the children in a single second grade classroom, one to which no student apprentice in the experimental group had been assigned. Thus, for the most part, contact between the children and the student teachers was limited to the Grouptalk sessions. Soon after each of the children's first Grouptalk session, the student leader and I met in conference. Xeroxed copies of her transcription of the tape of this Grouptalk session were distributed to the other student teachers, as were transcriptions of all of the adult Grouptalks.

Thereafter, the student teachers met with their second graders for six sessions, each followed as soon as possible by a conference with me. We listened to parts of the tape, talked about the individual children, their interaction in the group, and the student teacher's leadership technique. Each week a different student teacher transcribed her tape for circulation to the others. Sometimes the transcriptions were used in conjunction with the adult Grouptalk sessions. There were seven of these, generally with topics relevant to Grouptalk procedure and classroom problems (cf. Appendix II). Except for two sessions with the first experimental group when Dr. Bent took charge, I led all adult sessions. When the student teacher had completed the series of six sessions with her group, she visited their classroom for the first time to observe the children in that situation and to collect information from their teacher about their abilities and performance. At the end of the term, armed with numerous transcriptions, tapes, instruction manual and a variety of experiences with Grouptalk, the students consolidated their learning by writing a final paper covering four topics: (1) what the individual children had learned from Grouptalk, (2) changes that had taken place in the structure of the children's group, (3) what the student had learned about children, and (4) changes that had taken place in her self-image as a teacher.

3. Control Group Assignment In order to provide parallel experience in working with small groups, Dr. Bent asked the student teachers in the control groups to undertake an individual study project in which they would "give special attention to a pre-selected group of four to five children" — an appropriate request, since she usually makes reference to small groups in her curriculum seminars. To facilitate our assessment of what the experimental groups had gained from Grouptalk, which was their special study project, the students in the control groups also undertook an activity that would enable them to write a final paper which, in addition to giving an account of their project, would answer four questions equivalent to those assigned at the beginning of the term to the experimental groups. In other words, from the beginning we emphasized the importance of the final paper, specified the topics it would cover, and tried to direct the control groups toward an individual project which would involve working with children in a small group.

4. Evaluation: Basic Assumptions The person who evaluates a teacher training project should state as clearly as possible his conception of the ideal teacher before describing the tools used to measure change. Suppose the teacher training project helps produce better teachers. Just what does 'better' mean? In what way is the person closer to being an ideal teacher? The assumptions of Sorenson and Gross (1967) are, I believe, correct:

> that a teacher may be said to be "good" only when he satisfies someone's expectations, that people differ in what they expect from teachers, and that a scheme for evaluating teachers or for predicting teacher effectiveness must take those differences into account. (p. 1)

My judgments about teachers do not intentionally relate to the three categories of expectations postulated by these authors, which they label noninstructional variables, i. e., the teacher's relations with his superordinates, his manner and appearance, or his managerial and housekeeping skills. However, the three instructional variables which they postulate are basic to my evaluation of primary school teacher excellence, and my preference for one over another of their subcategories is clear. In terms of their categorizations, my beliefs can be stated as follows: (1) In his educational objectives, the good teacher gives "priority to such matters as the effect of the instructional process on the pupil's self-esteem or his willingness to engage in problem solving, and must avoid inducing anxiety or dislike of school." (p. 7) The acquisition of knowledge, although important, is not the only or major goal of teaching. Although the good teacher transmits social values necessary for responsible, participating citizenship, effective learning comes from facilitating personal growth rather than from teaching children to parrot social conventions. (2) To achieve his educational objective, the teacher should emphasize "the processes by means of which knowledge in a particular discipline is created" (p. 8) and subordinate the content of the discipline, adopt the "Discovery" rather than the "Didactic" role. (3) The interpersonal style of the good teacher is informal, friendly and non-punitive, rather than impersonal and rigid. I would add to their description of good interpersonal style both the dimension of clarity and consistency of demands.

My judgment of excellence in a teacher also is in harmony with the point of view expressed by Strom and Galloway (1967). They reject the aim of trying to identify the "good" teacher in favor of identifying the "better" teacher, using the teacher himself as the prime reference for judgments of self-success, i. e., the teacher's awareness of improvements in achieving his own instructional intentions. Evaluations of teacher excellence thus should also take into consideration evidence of growth on the part of the teacher toward his own ideal of the teacher's role. The tools used in this study to evaluate changes in the student teachers assume that 'good teacher' is to be defined according to these expectations.

There are three additional assumptions which affected my selection of the evaluation devices. One is that although the normal procedure for training Wheelock College students during their apprenticeship in their junior and senior years helps prepare the students to be good teachers in the above sense, it is effective to an unpredictable extent, because of the complexity of the interactions between the student's personality and ability and that of the classroom teacher. Student teaching is believed to be more beneficial when the temperament and educational philosophy of the master and student teacher are in harmony. If the student teachers in both the experimental and control groups are therefore expected to show unpredictable degrees of change in the same direction — presumably all girls would show some improvement as a result of their apprenticeship — then the effect of Grouptalk training could be detected only by especially sensitive measuring tools. Standard quantitative tests probably would be inappropriate. New ones would have to be devised.

Although direct measurements of teaching ability, would have been enormously useful, such as might have been obtained by observations of the student teachers in their first year of teaching, follow-up studies of this type were out of the question. I assume, therefore, that in evaluating the addition of Grouptalk training to the curriculum 'contributes to teacher preparation' means 'improves the teaching potential of a student', which is not necessarily synonomous with 'affects student teacher performance', although one anticipates there would be a high correlation between improved potential and excellence in performance in subsequent years. Furthermore, it is clearly inappropriate to assume that one can make reliable judgments of teaching ability when it is demonstrated by conducting a lesson in a master teacher's classroom. My measuring tools thus include intuitive projections based on my estimates and the students' self-estimates of change in teaching potential, in addition to the cooperating teachers' and Dr. Bent's ratings of teaching potential and performance in the classroom.

The final assumption of the evaluation procedure is that no single valid objective test of teaching potential or excellence exists or can easily be devised with the sensitivity requisite for our purposes. Bjerstedt (1967), who is in the process of constructing a battery of better tests based on an interaction-oriented approach, comments:

> The difficulty of predicting teaching effectiveness has been well known among educational research workers for a long time, and the amount of research directed at this problem has been impressive. Unfortunately, the results emerging from this research have been less than impressive and, in many cases, of no practical value at all. (p. 339)

Therefore, I have relied on a battery of five highly subjective measurements and one objective type. The appropriate statistical analyses are simple and descriptive. I have not calculated significant differences because the data do not warrant such attempted precision and to do so would be misleading.

The selection of the tools for evaluating the project clearly exemplifies the well known tendency of social research to yield conclusions that support the biases and value judgments of the experimenter. In his characterization of all social research, Muzafer Sherif (1970) concludes, "In effect, the researcher stages his own scenario." (p. 146) But by making his biases as explicit as possible, the experimenter can often help others achieve an independent evaluation. I hope the presentation of this report will enable the reader to reach his own conclusions about the value of instruction in Grouptalk as a teacher training instrument.

In short, in trying to answer the question, Does Grouptalk training help make better teachers? we assume agreement on the meaning of 'good teacher' and we also assume a high correlation between teaching potential and teaching ability. Finally, we assume that classroom teaching ability (observable only after graduation when the student has a class of her own) is a function of teaching potential plus experience and that supervised classroom teacher training during the term of apprenticeship can contribute to both. The evaluation tools needed for this project therefore must be able to pinpoint what Grouptalk adds to a student teacher's teaching potential and experience, as distinct from what other apprentice learning situations contribute. It does not help to measure the anticipated growth in teaching potential between the beginning and the end of the term. We must be able to measure the specific change which Grouptalk makes in the overall growth in teaching potential.

5. Evaluation: Procedure Followed Since Grouptalk, although broadly classified as a language arts study, does not teach content, we can exclude from the outset measures of proficiency in subject matter. We can also exclude measures of teaching potential which rely heavily on basic personality factors, because Grouptalk training does not affect these. Instruments were chosen which measure changes: (1) in the student teachers' educational objectives, (2) in their teaching techniques, and (3) in their teaching styles.

Six different types of data, described below in detail, were collected to help evaluate the contribution made by Grouptalk training to the student teachers' preparation. The final paper which all of the students wrote about their special project I considered the most important single source of information. In addition, all of the girls took two tests: Freeze's College Student Problems Q-sort (cf., Appendix III) and Whipple's Student Teacher Paragraph Completion Test (cf., Appendix IV) before beginning their ten weeks' student teaching experience and again on the last day of the term. The cooperating teachers and Dr. Bent, using the form in Appendix V, rated the students at the end of their first week in the classroom on their expected performance as student teachers and then rated them again on performance during the latter part of the student teaching experience. Ratings on Grouptalk leadership provided a fifth source of data. I rated the students first on the basis of performance in the first Grouptalk session which they led, then again on the quality of leadership shown in their last sessions with the same children. The dimensions of rating are described in Findings, D. (All of the ratings reported in this study are on a five point scale from a low of one to a high of five). Finally, the content of many of their adult Grouptalk sessions was examined for changes in the experimental groups' thoughts and feelings about teaching.

a. Final Paper. — All students knew at the beginning of the term that the special project for Dr. Bent's course would involve writing a final paper. The girls in the experimental groups were told that their paper should answer four questions: (1) What do you think the individual children in your group have learned from their participation in Grouptalk?, (2) What changes took place in the group relationships from the children's first to their last sessions?, (3) What has the Grouptalk project contributed to your understanding of children?, and (4) Are there changes in your self-image as a teacher that you can attribute to your experience with Grouptalk?

Since the students in the control groups each pursued an individual study in their own classrooms, they were asked first to describe the nature of their special project, then to answer four basically equivalent questions. Both Dr. Bent and I explained the assignment at length when handing out the mimeographed instructions and again several times just before the students began writing their final papers, making every effort to ensure coverage of the four areas in which the groups would be compared.

The first topic, What did the children learn from the special project? was included for two reasons: primarily because it encouraged the student teacher to focus on the individual child and his potentialities, but also because I thought the study could be used to support previous impressions of the pedagogical value of Grouptalk training for children at the second grade level. The experimental group, I hoped, would mention affective as well as cognitive aspects of children's learning, regardless of whether or not they thought changes had occurred.

The second area of concern — changes that took place in group relationships — would be handled quite differently, I anticipated, by the experimental and control groups. The student teachers in the experimental groups would look at group dynamics quite closely and describe the children's interactions with a sensitive understanding of factors leading to the degree of cohesion that had been achieved. The control students, on the other hand, would show less interest in and understanding of group dynamics. Furthermore, whatever evidence might be available would indicate less awareness of specific ways in which a group leader's behavior affects children's interactions.

It might be harder to evaluate statements about what students' projects had contributed to their understanding of children. Presumably, everyone would say that they learned something. The very nature of the writing assignment might even lead them to exaggerate a little. Yet I very much hoped that careful reading of the final papers would enable the reader to separate fact from fiction. If the Grouptalk experience had its anticipated effect, there would be more emphasis in the experimental groups on developmental characteristics of the particular group observed — they would feel they knew more than they had previously about the thoughts, feelings and capacities of children of that particular age.

Small changes in the student teachers' self-image in the direction of greater self-confidence were anticipated in both the experimental and control groups. Their individual projects had given them all the opportunity to take the responsibility of teaching a small group of children and, as a result, one would expect the teacher's role to seem more natural. But, hopefully, the instruction in Grouptalk technique would make a larger contribution in this respect. It would also, I expected, make a qualitative difference: the student teachers in the experimental groups would be much more inclined than previously to see themselves in the role of teacher as a resource person rather than as a dispenser of information and facts, and more apt to place a high value on small group discussion, particularly when peer-oriented.

b. Adult Grouptalk Sessions. — Since the discussion question selected for six out of the seven adult Grouptalk sessions in both experimental groups related in some fashion to teaching (cf. Appendix II), much of the content of these sessions is relevant to an assessment of what the student teachers gained from their Grouptalk training. No comparisons can be made with comparable discussions among the students in the control groups for none were held. But the transcripts of the adult sessions serve as an additional source of information, which should corroborate the conclusions reached from reading the final papers of the experimental groups. Discussion of the question, "What has Grouptalk taught you about children?" for example, would be expected to cover some of the same ground as the students' treatment of the topic, "What has the Grouptalk project contributed to your understanding of children?"

c. Ratings of Grouptalk Leadership. — On the basis of listening to tapes — I was never present while the student teachers led their sessions with the children — I derived a score for Grouptalk leadership performance (cf., Findings, D). This overall rating on a five point scale (poor to excellent) is the average of the ratings assigned on six variables, each of them rated on a five point scale.

My expectation was that all students would improve in their ability to lead Grouptalks as a result of increased familiarity with the technique, that their ratings at the end would be higher than at the beginning — even though the skill involved in leading the sixth session successfully is greater than that required for leading the second. Admittedly, the skill gained in leading a particular type of small group discussion — Grouptalk — might not necessarily have a direct bearing on classroom management. But presumably, it would be a step in the right direction: at least the student teacher should be better prepared to lead small group discussions in the classroom.

Some learning, I anticipated, would not be reflected in these leadership ratings. It is important to remember that they are ratings of actual performance in leading groups of varying degrees of difficulty. Significant learning could result from having a difficulty group which the student teacher could not handle effectively.

d. Student Problems Q-sort. — This test devised by Freeze (1963) provides a validated measure of openness to experience, a variable presumably related to teaching excellence in the sense in which it is understood here. After Rogers postulated a personality continuum from "closedness to experience" to "openness" and showed that this variable was related to successful therapy, several investigators explored the usefulness of the concept in the field of education. Bills, et al. (1964) summarize these efforts:

> There appear to be direct relationships between the openness of a teacher to his experience, both past and present, his judged teaching success, his effect on attitudes toward self and others of pupils, the locus of responsibility for decision making within his classrooms, his ability to change in a learning situation, and the quality of the helping relationships he offers pupils. (p. 1)

Bills and his co-workers continued the research first reported by Freeze on changes in openness scores of student teachers before and after their student teaching experience and found, as he had, that significant negative change occurs during this period. This undesirable result is interpreted as a function of tension producing aspects of the student teaching situation. Bills, et al., suggest a variety of ways these tensions might be alleviated, many of which coincide with the conditions present during Grouptalk training. It therefore seemed worthwhile to investigate the relationship between openness scores and Grouptalk training, and include, as the previous investigators had done, Q-sort scores of the cooperating teachers (cf., Appendix VII). Use of these tests could provide a relatively clear-cut, objective way of documenting one possible contribution of Grouptalk to the Wheelock teacher preparation program: a reduction of some of the tension producing aspects of the student teaching situation.

e. Teacher Ratings. — The rating form set up for the project (cf., Appendix V) consists of three parts: (1) a list of personality traits and abilities said to be associated with excellence in female teachers (Gough, Durflinger, and Hill, 1968), (2) skills related to Grouptalk leadership, and (3) an overall assessment of the student teacher's performance in the classroom. All ratings are on a five point scale. Because I differentiated characteristics that were and were not expected to be influenced by Grouptalk training, I hoped that the ratings in categories (2) and (3), made at the beginning and at the end of the training experience by Dr. Bent and the cooperating teachers (especially if there were close agreement between the paired judgments), would help demonstrate the contribution of Grouptalk to the student teacher's preparation. The additional ratings that Dr. Bent and the cooperating teachers made of the student teachers' teaching ability, using the standard Wheelock and Newton Public School forms, could provide some check on reliability. Clearly, however, even highly reliable data would have to be interpreted with caution: the final ratings are based on observations of performance before the special Grouptalk training had been completed. Also, since the teaching was done in the cooperating teacher's classroom, the performance was not always the student's best: some of them felt obliged to conduct the lesson in accordance with the teacher's wishes and not as they would in their own classroom.

f. Student Teacher Paragraph Completion Test. — This unstandardized projective test (cf., Appendix IV) was designed to measure student teacher's beliefs and feelings in the area of teaching that might be affected by exposure to Grouptalk technique. It consists of five incomplete paragraphs describing a hypothetical situation in an elementary school. The student teacher is asked to finish them: "State how you think you would feel in that situation, the thoughts you might have and the actions you might take." There are two ways of scoring the responses. One method of scoring yields quantitative ratings on a five point scale on one or two dimensions for each of the five incomplete paragraphs. This means that group comparisons can be made on initial attitudes and beliefs as well as on changes for each of the dimensions rated. The second method of scoring, based upon a comparison between the content of the responses of an individual before and after the student teaching experience, results in an individual profile rich in information but not amenable to use in group comparisons.

If we assume this projective test does provide sensitive, valid measures, and Grouptalk training does accelerate the growth process towards becoming a good teacher, then we would expect to find greater differences between the test and re-test protocols of the experimental than of the control groups, i. e., more evidence of growth. In the commitment to teaching there would be more emphasis on reality, less on idealistic factors, more security in the authority role. The objectives of teaching would be stated more clearly and concretely in terms of the development of individuals within a group context. The teacher would be seen more as a resource person, less as a dispenser of factual knowledge; as a person who gives structure to the classroom in a non-punitive way. Finally, awarness of thoughts and feelings of others would also increase more.

g. Subjective Assessment. — It was our anticipation from the outset that in the final analysis Dr. Bent and I, and hopefully the reader also, would intuitively weigh results from the various types of data described above to arrive at firm and similar conclusions about the usefulness of Grouptalk technique as a teacher training instrument.

II. FINDINGS

Six different types of data, as we have seen, are relevant to the central question posed in the exploratory study, Does training in Grouptalk technique add significantly to the preparation of student teachers? The presentation of the findings begins with the more objective, albeit less informative, sources of information, and ends with the student teachers' final papers, which communicate the most. The most convincing way to report the data certainly would be in terms of individual profiles. The effect of introducing Grouptalk training is seen most clearly in case histories which can take into account all the complexities of the student teaching situation. However, this method of presentation with a sample as small as ours, would trespass on the student teachers' rights of privacy. I have carefully kept the anomymity of the students protected at the expense of optimal presentation of the data by assigning different numbers to the students in each of the following sections, making it impossible to trace individual profiles.

A. STUDENT PROBLEMS Q-SORT

Freeze's Student Problems Q-sort, which yields openness scores for student teachers, presumably measures a quality of personality correlated with teaching excellence and mental health. It was my hypothesis that any clear cut variation from the findings of previous investigators, i.e., that openness tends to decrease during student teaching, would indicate the value of the teacher training procedures followed at Wheelock College by reducing anxiety associated with student teaching. Furthermore, if there were differences between the experimental and control groups, this would provide some basis for evaluating the effectiveness in reducing anxiety of adding Grouptalk training to the student teaching program.

At the outset, the experimental and control groups differ only slightly in openness — +18.4 versus +20.6. Both groups are moderately high in openness on a scale which ranges from -64 to +64 (cf. Table 1). The junior control students have a higher average score (+21) than the junior experimental group (+12.2), but the relationship is reversed for the seniors (24.6 for the experimental group versus 18.2 for the control students).

Unfortunately the data on differences on Q-sort scores before and after student teaching do not yield clear cut results, as inspection of Table 2 shows. The average change is positive for one experimental group (+3.0), negative for the other (-5.3). The same is true for the two control groups (-3.8 and +7.4). The variability is high in all four. A tendency toward positive changes in the control groups and toward negative changes in the experimental groups might be inferred if we could remove from consideration the two students who have an extremely large difference in the pre-teaching and post-teaching test scores (+30 and -18). But what reasonable justification is there for doing this?

TABLE 1. — Q-Sort Scores of Student Teachers in Experimental and Control Groups at Start of Student Teaching

Experimental group		Control group	
Student	Q-sort score	Student	Q-sort score
Group I (juniors)			
#1	8	#11	4
2	25	12	27
3	23	13	17
4	14	14	32
5	- 9	15	25
Average	+12.2		+21
Group II (seniors)			
#6	38	#16	15
7	23	17	27
8	25	18	32
9	22	19	6
10	15	20	11
Average	+24.6		+18.2
Average (I and II)	+18.4		+20.6

TABLE 2. Changes in Openness Scores of Student Teachers After Ten Weeks' Student Teaching

Experimental group		Control group	
Student	Change in openness score	Student	Change in openness score
Group I (juniors)			
#1	- 4	#11	+ 1
2	- 7	12	+ 1
3	- 5	13	+ 2
4	+ 1	14	-18
5	+30	15	- 5
Average	+ 3.0		- 3.8
Group II (seniors)			
#6	- 8	#16	+ 8
7	+ 6	17	+15
8	-11	18	+ 2
9	-10	19	+ 1
10	- 3	20	+11
Average	- 5.3		+ 7.4
Average (I and II)	- 1.2		+ 1.8

It is interesting to note in passing that almost all of the Wheelock students in both the experimental and control groups in the two testing situations indicate extremely low concern with nagging and pressure from their parents to make good grades, but classify the following items as extremely pressing problems:

#38. Learning what is most important for me to do, to be, or to get from life.
#63. Continuing to learn more about myself and what is important to me.
#66. Growing in my abilities to evaluate my needs.

It is tempting to conclude from the Q-sort data that the Wheelock College student teacher training program does not influence emotional maturity. I would prefer to conclude either that because we are dealing with such a small sample, both the raw scores and group averages are misleading, or preferably that the validity of the test is questionable.

Close examination of individual item changes shows enormous variability for all twenty students. These changes are not reflected in the final scores, however, because they cancel out. Almost a third of the 84 items change in sign value (open to closed, or vice versa); nine of these are migrations from one extreme end of the Q-sort to the other. These changes indicate either that something important has happened, that the students' perceptions and problems have indeed been affected by their student teaching experience even though no other evidence for this exists, or else that the test does not give reliable measures. It is also possible that the population on which it was standardized differs markedly from ours.

Whatever the reason, conclusions drawn from the Student Problems Q-sort must remain inconclusive. It is therefore futile to relate changes in openness scores of student teachers to those of their cooperating teachers, as we had anticipated doing (cf., Appendix VII).

B. TEACHER RATINGS

The ratings which Dr. Bent made at the beginning and end of the student teaching experience of each of the twenty student teachers, using the rating form in Appendix V, provide a numerical evaluation of their performance as student teachers and their teaching potential. Her ratings assure more uniformity in frame of reference for the judgments than use of the cooperating teachers' ratings would supply. There is a high degree of correspondence between the two, however. Analysis of the relationship between them leads to the conclusion that Dr. Bent's ratings are more suitable for this study and perhaps have higher validity — divergence between the two is greater at the beginning than at the end, with shifts in the ratings of the cooperating teachers going in the direction of Dr. Bent's.

1. Beginning Status What then do her ratings show? Ratings made at the end of the first week of student teaching are helpful in assessing the equivalence of the experimental and control groups. Although her

initial impressions indicate that the two groups were similar on ratings of isolated traits, e.g., affectionate, logical, etc., on more global characteristics, e.g., resolute in pursuing goals, open to new experience, ability to guide small groups, etc., and on the overall ratings of probable performances as student teachers and teachers (cf., Table 3), the two control groups are slightly higher in both categories. This slight initial superiority in the teaching potential of the control group also shows up in other comparisons between the groups, such as confidential ratings by the cooperating teachers on "Beginning Status" on the "Student Teachers Progress Report" for the Newton Public Schools.

TABLE 3. — Supervisor's Ratings of Student Teachers after one Week of Student Teaching on Probable Performance as Student Teachers and Ultimate Teaching Potential

Experimental group			Control group		
Student	Probable practice teaching performance	Ultimate teaching potential	Student	Probable practice teaching performance	Ultimate teaching potential
Group I (juniors)					
#1	4	4	#11	4	4
2	4	4	12	4	4
3	3	3	13	4	4
4	4	4	14	5	5
5	4	4	15	3	4
Average	3.8	3.8		4.0	4.2
Group II (seniors)					
#6	4	4	#16	5	5
7	3	3	17	2	3
8	3	3	18	5	4
9	5	4	19	5	5
10	4	4	20	4	4
Average	4.0	3.6		4.2	4.2

2. Effect of Student Teaching What do the ratings tell us about the student teachers' progress during their apprenticeship? Dr. Bent's initial ratings provide a useful baseline for measurements of change, since she rated the students again at the end of the term.

Ratings on isolated personality traits changed, but very little, indicating either that the student teachers changed in their behavior somewhat or were seen in a slightly different light after further observation. Since these changes occur in the ratings for all four groups and are small, they can be disregarded as irrelevant to evaluations of Grouptalk training. Indeed, the construction of the rating form was predicated on the assumption that these isolated personality traits would not be influenced by the student teaching experience.

Changes in ratings of global personality characteristics, which had been included because they might indicate an effect of Grouptalk training, are indicated in Table 4. The data make it clear that there is no overall difference that can be attributed to Grouptalk training: the average gain of the experimental groups (+0.5) is close to that of the control groups (+0.4). Even on "ability to guide small groups" the gains are the same for the experimental and the corresponding control groups (+1.4, +1.2, and +0.8, +0.8).* The juniors in both groups on the average gained more (+0.8 and +0.5) than the seniors (+0.2 and +0.3), a not unexpected finding. However, it is somewhat puzzling to find negative scores, i.e., lower ratings at the end than at the beginning of the term. Comparison with similar ratings on the Newton Public School forms, where "Initial Status" and "Present Status" are checked simultaneously at the end of the term, suggests that the findings are misleading — some teachers indicated on the Newton form that there had been no progress, but none said the student teachers retrogressed!

TABLE 4. — Average Group Scores and Gains on Ratings of Six Global Personality Characteristics After Student Teaching

Global personality characteristic	Experimental group				Control group			
	I Juniors		II Seniors		I Juniors		II Seniors	
	Score	Gain	Score	Gain	Score	Gain	Score	Gain
1. Open to new experience	3.4	+0.4	3.2	-0.2	3.2	-0.2	4.2	-0.2
2. At ease with children	3.6	+0.8	3.6	+0.4	3.6	+0.4	4.6	-0.2
3. Ability to guide small groups	3.0	+1.4	3.0	+0.8	2.6	+1.2	3.6	+0.8
4. Appropriateness of demands on ...	2.6	+1.0	3.0	0	3.0	+0.6	3.8	+0.6
5. Helps children take responsibility for ...	3.0	+0.6	3.0	0	2.6	+0.6	3.6	+0.2
6. Consistency in management	2.6	+0.6	2.8	+0.2	2.8	0	3.6	+0.6
Average score	3.0		3.2		3.0		3.9	
Average gain		+0.8		+0.2		+0.5		+0.3
Average gain (Exper.vs.Control)	+0.5				+0.4			

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*In this connection it is important to state that comparisons between what the cooperating teachers of the experimental and control groups wrote in their qualitative comments on the Newton Public School form for rating student teachers suggests a different picture, i.e., that many students in the control groups were more in need of group leadership skills than in the experimental groups.

Because of the nature of the rating task, the findings are ambiguous. We could conclude that rating these global characteristics was a difficult task when there was little evidence to rely on at the beginning of the term; but perhaps the final ratings would have been different had the initial ratings been available for comparison at the end of the term.

What about differences in anticipated performance as student teacher (rated at the beginning) and actual performance (rated at the end of the term)? Table 5 shows that the average performance in all four groups is not quite as good as Dr. Bent had expected it to be. Nine of the 20 student teachers did not do as well. Only three of the 20 students, two of them in the experimental groups, did better. The predictions assumed a certain degree of uniformity in the classroom situation. But some cooperating teachers were absent for long periods and several juniors were heavily preoccupied with college obligations associated with campus political unrest. Many factors could account for these differences between predicted and observed performance in the student teaching situation in addition to inadequate observations on which to base the predictions and unanticipated student growth.

TABLE 5. — Differences in Supervisor's Ratings of Anticipated and Actual Performance in Student Teaching*

Experimental group		Control group	
Student	Difference	Student	Difference
Group I (juniors)			
#1	0	#11	-1
2	-2	12	0
3	+1	13	-1
4	0	14	0
5	-1	15	0
Average difference	-0.4		-0.4
Group II (seniors)			
#6	-1	#16	0
7	0	17	+2
8	+1	18	0
9	-2	19	-2
10	-1	20	-2
Average difference	-0.6		-0.4

*Differences between Supervisor's ratings at end of one week and 10 weeks are positive if the second rating was higher.

The shifts in the ratings of teaching potential are of greater interest because the direction was unanticipated (cf., Table 6). Seniors, on the average, are not rated as highly at the end of the term as they were at the beginning. Four of the ten students in the experimental group and two in the control group have lower ratings. Again, it is difficult to interpret these data as indicating less actual competence at the end of the period of student teaching than at the beginning. Perhaps there was too much ambiguity in my request to rate "ultimate performance as a teacher" and perhaps the final ratings should have been made with the initial ones available for comparison.

TABLE 6. — Differences in Supervisor's Ratings of Teaching Potential before and after Student Teaching*

Experimental group		Control group	
Student	Difference	Student	Difference
Group I (juniors)			
#1	+1	#11	0
2	-1	12	0
3	+1	13	0
4	+1	14	0
5	0	15	0
Average difference	+0.4		0
Group II (seniors)			
#6	-1	#16	0
7	0	17	+1
8	+1	18	0
9	-1	19	-1
10	-1	20	-1
Average difference	-0.4		-0.2

*Difference is positive if second rating was higher.

Another ambiguity concerns the comparability of juniors and seniors on this scale. For juniors, did the rating take into account the additional ten weeks period of apprenticeship they would have when they were seniors? Can one take into account the "average amount of progress expected" and make it mean the same thing for juniors and seniors? Another source of data suggests that this is inadvisable: the Newton Public Schools ask for ratings of the student teacher's readiness to teach on her own. In this context, the junior experimental group rate a little below average (2.8) and the control group a little above average (3.2). The senior groups are about the same (3.6 and 3.8), but both slightly higher than the junior groups.

'Teaching potential' and 'readiness to teach' clearly mean something different — but one would not expect a rating on either to go down after a ten week student teaching period! Since it is extremely difficult to make predictions on the basis of one or two observations at the beginning of a student's apprenticeship, perhaps Dr. Bent's judgments at the end of the term should be considered more valid. In general, Dr. Bent's confidence in her ratings was higher at the end of the term than at the beginning, as Table 7 shows. But her confidence increased mainly with regard to rating the two control groups (+0.8 and +0.6). At the end of the term, Dr. Bent is slightly less confident in rating both experimental groups (-0.6 and -0.2) than she was at the outset. Half student teachers in the experimental group are rated with less assurance at the end than at the beginning.

TABLE 7. — Supervisor's Confidence in her Ratings of Students before and after Student Teaching on Ultimate Teaching Potential*

Student group	Supervisor's average confidence rating					
	Experimental group			Control group		
	Before	After	Difference	Before	After	Difference
I (juniors)	3.6	3.0	-0.6	3.4	4.2	+0.8
II (seniors)	2.8	2.6	-0.2	2.8	4.4	+1.6
Average difference			-0.4			+1.2

*Difference is positive if second rating was higher.

To summarize: two control groups, initially rated somewhat higher in teaching ability than the experimental groups, finish with ratings quite similar to the ones they had at the beginning. One experimental group is rated more highly after student teaching, the other has lower ratings on the average. But the rater's confidence in her judgments of the experimental groups is still low at the end, in contrast with the increased confidence she has in her ratings of the control groups. The quantitative data thus make it difficult to draw any conclusions about the effect of the experimental procedure on teaching potential. In fact, none of the data on ratings are sufficiently unambiguous to be useful in evaluating the exploratory study.

C. STUDENT TEACHER PARAGRAPH COMPLETION TEST

Before and after the period of student teaching, five paragraphs (cf., Appendix IV) were presented to the students to complete in the expectation that the answers would be useful in assessing attitudes about and perceptions of the teaching situation. Since there was insufficient time to conduct preliminary tests with the Student Teacher Paragraph Completion Test, there was no assurance that it would be discriminating. Responses were scored on seven variables relevant to changes in attitude that might be produced by Grouptalk training. Assuming that the projective test was discriminating, I hoped that this analysis of the data would help answer the following questions: Would the experimental group show greater sensitivity to group dynamics, greater understanding of how to motivate children to learn, place more emphasis on the importance of children's discussions, especially peer-oriented ones? Would there be a greater degree maturity in these students' preception of their role as teacher? Would their views on classroom management change more?

1. Group Differences Two incomplete paragraphs, i.e., IP #2 and IP #4, yield no useful information about group changes. Most of the students in both of the experimental and control groups completed IP #2, about motivating children to learn, in much the same manner. Their opinions did not shift with time. IP #4, about reasons for teaching, led to such a wide variety of answers that no useful dimension of

analysis was applicable to all. The other three incomplete paragraphs, i.e., #1, #3 and #5, were helpful in detecting changes of opinion and did yield interesting group differences.

a. Incomplete Paragraph #1. — This paragraph begins as follows:

> A teacher with many years of experience in the classroom told her young apprentice to be very careful from the beginning not to let the second graders get the upper hand, "They cannot be trusted. Most of them enjoy scheming to embarrass or destroy you."* The student teacher considered this advice .....

Responses to this incomplete paragraph are scored on two dimensions: (1) sensitivity to the complex group dynamics in the situation — the interrelationships between the student teacher, the children, and the cooperating teacher, and (2) the student teacher's confidence in her own philosophy of education.

Table 8 shows that in the experimental groups there were altogether 12 shifts out of 18 possible positive shifts in attitude and only one negative shift, whereas in the control groups there were only three positive out of 16 possible positive shifts and two negative ones. No students in the control groups increased their scores on both variables, whereas four did in the experimental groups.

TABLE 8. — Final Ratings and Differences in Ratings after 10 Weeks in Responses to Incomplete Paragraph #1 — Scored for Sensitivity and Confidence*

	Experimental group				Control group				
	Sensitivity		Confidence			Sensitivity		Confidence	
Student	Rating	Diff.	Rating	Diff.	Student	Rating	Diff.	Rating	Diff.
Group I (juniors)									
#1	4	+3	4	+3	#11	4	0	4	+4
2	5	+1	4	0	12	1	0	1	0
3	1	0	4	0	13	1	0	5	0
4	1	0	4	+1	14	4	0	2	0
5	5	0	5	0	15	5	0	2	0
Average final rating Average difference	3.2	+0.8	4.2	+0.8		3.0	0	3.4	+0.8
Group II (seniors)									
#6	3	0	5	+1	#16	1	0	2	0
7	3	+2	5	+1	17	1	0	4	0
8	1	-1	3	+2	18	4	-1	4	0
9	5	+4	5	+1	19	5	0	4	0
10	4	+1	5	+1	20	2	-3	4	+1
Average final rating Average difference	3.2	+1.2	4.6	+1.2		2.6	-0.8	3.6	-0.2

*Difference is positive if second rating was higher.

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*The quotation is typical of letters of advice to beginning teachers found in a professional journal.

The following excerpts from two students' first and second protocols illustrate the change that was noted in the responses of five student teachers in the experimental group, i.e., increased sensitivity to group dynamics and the teacher's role in structuring situations that lead to trust:

Student # 7: In my teaching experiences I have found that children are open, honest, trustworthy, sincere, and have an innate hunger for knowledge. (First IP #1)

I have a strong belief that children can be trusted. However, this trusting of children does not mean a lack of your presence in establishing limits. Children need guidance, a sense of direction, and most important a feeling of security and fairness with a teacher. They want and need to feel a control and a trust. I think if you approach children with this attitude there would never be a situation of scheming or desire to destroy you. There would be a sense of mutual love, respect and understanding — on the part of the teacher and children. (Second IP #1)

Student #10: I won't let them get out of hand. I have always been a friend to children and feel that if I respect them, they will me ..... It has worked in the past and I would like to let my philosophy work for me in this class if it is all right with you. (First IP #1)

The student told her teacher that she realized that it was very important for the children to understand that what she says, she means and to establish her form of discipline from the start so that the children do not become confused as to what behavior is acceptable and what isn't. However, she also stated that she does think that they can be trusted if they have an understanding as to how she operated and if so, joined by the respect and friendship between herself and the students, they will have no cause to destroy her.

She tried to follow this up with conferences, etc., to try and understand why this teacher felt the way she did. (Second IP #1)

Other excerpts illustrate increased confidence in the student's own capacity to establish good relationships with children:

Student #8: The advice was a very upsetting comment for the beginning of an experience ..... I would attempt to be objective and make my own conclusions about the class, but I'm sure her comment would, unfortunately, remain in the back of my mind. (First IP #1)

I would question the validity and more important the motivation for her statement, and why she felt this was happening to her. In the beginning I might have this in the back of my mind yet I would attempt to not prejudge on her

> personal experience. I would handle it as a new experience and assess their reaction to me as a teacher. I would hope to pretty much ignore this and make my own decision and observation. (Second IP #1)

These changes, so prevalent in the experimental groups, hardly occur in the control groups. Only two students in the control groups made a positive shift in one dimension, self-confidence:

Student #11: At first I might feel afraid of the children and wonder if I could be firm enough to get control of the classroom. On thinking about what the teacher had said some more, it would probably occur to me that she was a very hardened teacher and was being awfully harsh toward the children. I would think it best to be cautious when the teacher is around. She would probably not be happy at all if I became friendly with the students as that would make me seem to be against her. I would have to watch the class in action but would probably feel sorry for the children who had this harsh teacher. As much as possible I would observe closely the actions and facial expressions of the children in the first couple of times I was in the classroom, and I would have to try hard to work with the teacher and not to antagonize her until I understood the situation more fully. (First IP #1)

> This teacher must be very insecure in her dealings with her children. Children can be trusted if they are given responsibility right from the beginning. Children are very frank and usually honest so that they may well at times embarrass you, but, often times, they can see a teacher's dishonesty behind it. This teacher will probably be a hard person to work with as she will probably be on the defensive with a student teacher who develops any rapport with the children; at the same time, the children probably need a good deal of understanding so that they can realize that a teacher can be a friend and is in the classroom to help them. (Second IP #1)

The second student whose self-confidence increased, (#20), seems, however, to have less concern at the end of her practice teaching for how the cooperating teacher would respond to her:

Student #20: I would be rather frightened by the idea of teaching in this classroom. It seems as if the teacher is more involved with controlling the class rather than teaching them or knowing them. I would feel though that I would have to not let the children get the upper hand because this is the way my cooperating teacher runs her classroom ..... I would try to find out why the teacher thinks the children cannot be trusted and the reasons for this. Also I think it is important for me to get to know the children as individuals and establish some kind of basic trust with them. I think

> that by trusting each other fewer discipline problems would evolve. (First IP #1)
>
> There was no basic trust relationship between the teacher and her pupils. I would try to establish some sort of trust with the second graders and myself. I do not think that I would believe the teacher in that the second graders were trying to embarrass and destroy me. This attitude is very negative and definitely destroys the chances of having any good, sound relationships with the children. I think it would be good to get to know the children, the classroom situation, and the teacher to find out exactly why she felt this way. (Second IP #1)

b. Incomplete Paragraph #3. — This paragraph, which also elicited interesting differences between the experimental and control groups, begins as follows:

> Some years ago, I visited a well-known demonstration school. Each classroom had a carefully picked teacher. Visiting the rooms in this school with the principal one day, I was much impressed with the beautiful work that many of the students had produced. Classroom after classroom was charmingly and artistically decorated with the children's productions: art work, science demonstrations, biological specimens, collections of all sorts and descriptions. After five or six such rooms we walked into another so different from the others as to be almost a shock. This room was nearly bare of the materials we had seen in the others. Instead, in this class the teacher sat in the middle of a group of children holding a quiet discussion. Leaving the room with the principal, I remarked on this fact, ...

Scoring of the responses is along a single dimension: attitude towards discussion — the value attributed to children's discussions in a lower elementary school curriculum. The range of the ratings is from rejection of discussions and a strong preference for activities (1) through feeling discussions might be good (3) to a strong conviction that they should be included, though not at the expense of other activities (5).

Table 9 shows that five of the eight students in the experimental groups who could increase their valuation of discussion did so and none gave it less importance at the end of the term. The students in the control groups present a very different picture: three positive shifts, three negative shifts, and four no change at all.

TABLE 9. — Final Ratings and Differences in Responses to Incomplete Paragraph #3 — Scored for Attitude Towards Discussion*

Experimental group			Control group		
Student	Rating	Difference	Student	Rating	Difference
Group I (juniors)					
#1.....	4	+2	#11.....	5	+1
2.....	5	+2	12.....	2	0
3.....	5	+1	13.....	1	-1
4.....	4	+3	14.....	4	+4
5.....	5	+2	15.....	4	0
Average final rating	4.6			3.2	
Average difference		+2.0			+0.8
Group II (seniors)					
#6.....	5	0	#16.....	3	-2
7.....	1	0	17.....	1	0
8....	5	0	18....	3	-2
9.....	2	0	19.....	4	0
10.....	5	0	20.....	5	+1
Average final rating	3.6			3.2	
Average difference		0			-0.6

*Difference is positive if second rating was higher.

In the experimental group one student whose opinion about the value of discussions increased first writes:

Student #4: Either this room is not experiencing the realms of all sorts of creative activity, or the children have brought all their work home to their families. This was my "light" remark; but I really wondered why this classroom was practically bare of the lively material that meant so much to me as a child. As we walked in, I thought about how the children in the quiet discussion group were feeling — they must have been so eager to just express themselves with vital activity, motion, and just doing something. There's a time and place for gentle discussions with children, but it just seemed to me that they were being restricted and held down. Children want to be busy and involved with action. This situation seemed actionless to me.

> I realized that my short visit was really not enough to form an opinion in, so I scheduled a conference with the teacher of this classroom to talk to her about it and find out her beliefs and goals as a teacher. (First IP #3)

After Grouptalk training, her opinion changes:

> Either the children have taken all their art work and material home or this classroom is more engrossed in different aspects of learning.
>
> Knowing that this was a well-known demonstration school, I kind of felt positively about it. If these children were honestly involved in this discussion and seemed to be gaining a lot from it, then this experience must be of great value. And yet, I feel that there should be "creative life" around them. It's beautiful, broadening and stimulating. Life is more than a small, quiet circle. Having some science demonstration and biological specimen in the room gives them tangible evidence of the outside world — more than just themselves. There should be a mixture of everything. (Second IP #3)

Two other students express views at the end of the term on the importance of including peer-centered discussions in the curriculum with even greater conviction:

Student #3: Wow! They seem to be having a Grouptalk or a Classtalk! I was pleased to see that the education of the child at this school included informal conversations. Through this process you get a much more complete picture of a child's personality. This indicated to me that the children were experiencing a very complete process of learning involving all parts of their personality. (Second IP #3)

Student #5: .....the important thing is that all of it come from the children. I also think it is exceedingly important to give the children frequent opportunity to verbalize themselves. (Second IP #3)

Two others retain their previously high opinion of discussions:

Student #6: I feel informal discussions would benefit the child much more — drawing the reserved child out and letting the children help each other instead of heaving a teacher-oriented talk. (First IP #3)

> .....discussion is very important in a child's social and mental development ..... It is necessary to incorporate a time for group discussion in that schedule. (Second IP #3)

Student #10: This group of children were becoming an active part in their education ..... they were communicating not through

> such media as paint and rocks, but through speech. They were learning one of their most important lessons, how to communicate with others in a very intellectual way. (First IP #3)
>
> .....this teacher is more reliant than the others on group communication. This is a great way to teach them both academics and social learning, how to live and talk with people. (Second IP #3)

Only two students in the experimental groups respond to incomplete paragraph #3 either with skeptical or negative comments about discussion at the end of the term.

Student #9: This room is so different from all the others! What goes on in there? (Second IP #3)

Student #7: .....I am interested in understanding what as a teacher her goals are and how she is trying to accomplish them. I would be curious to know how she has set up her particular room and why. I would express my opinions that children do not learn in a quiet sterile classroom. Hopefully, we would have an honest enough discussion to draw some conclusions. (Second IP #3)

In sharp contrast to the numerous changes of opinion among the majority of the students in the experimental groups, there are almost no shifts whatsoever in the control groups. Five student teachers think highly of discussion at the beginning and do at the end, too. This pair of responses is typical:

Student #11: Perhaps this teacher can reach his class by talking. He may have such a rapport with his children that they find it easy to express themselves in words more than in art work. His sitting in the middle of the group and talking quietly may be of more value to the children than having him stand up in front of the room and give some sort of an assignment which the students would then produce. (First IP #3)

> I think that discussion is a very important part of any classroom, as children must feel free to express their ideas and must have the skills to do this. (Second IP #3)

Another student maintains an open mind to both types of teaching techniques:

Student #19: I should think the discussion classroom requires a lot more from the teacher — she relies on herself as a means to educate — other classrooms rely on the materials to educate. Which is more effective? (First, IP #3)

Two students begin the term with a more positive attitude towards the discussion taking place in the experimental school than they have at the end:

Student #16: This teacher was holding a very important activity — that of talking, discussing, and listening. The room they used was of little importance unless they were discussing some aspect of their classroom experience ..... Otherwise things on the walls might have hampered a free discussion in which everything came from the children's mouths and minds alone. (First IP #3)

There is always merit in a quiet discussion between children and teacher when the topic is interesting enough to hold their attention and have everyone contribute. Usually, however, an experience in science or art is much more meaningful and lasting to children. They are geared to play, action, and getting into things; and especially for a less verbal child, the experience learned through doing something is closer to their realm of activity. (Second IP #3)

Student #13: I, too, would be curious why when all the other classes were designed or set up in one way, another room was entirely different. Perhaps the teacher found it more effective to conduct her class in a quiet discussion. Maybe the students in this classroom have the same advantages the other children do during part of the day, and then the teacher likes to take them aside in an informal manner. Perhaps the students are more relaxed in an atmosphere like this. The teacher could also have been trying to test or analyze a group of children by allowing them to talk with her and their fellow students. (First IP #3)

The teacher in this class apparently felt that this type of a classroom was more conducive to working than one with a lot of things going on at one time. I would certainly have wondered, however, if this was the way the class was always conducted and arranged. The appearance of a room often shows the type of personality a teacher possesses. Perhaps this teacher felt that it was more beneficial to the children's learning processes to verbalize rather than to have the children examine things and learn on their own. It sounds as though the teacher was not allowing the children to think enough on their own by not allowing them to create art work or work with learning materials. She sounds as if she would rather have a quiet classroom than one which is maybe noisier but the children are working or playing constructively. (Second IP #3)

Finally, two other students in the control groups start off with a negative evaluation of discussion and do not change:

Student #12: But I wonder if the children in this last room don't feel a little cheated when they see the other rooms ..... I don't think that every teacher can have the same amount of art work or science, etc., in his room just for the sake of having it, but I wonder if his children feel free to express themselves in this way. (First IP #3)

The teacher must be a very independent person. I would like to speak to her sometime about her methods and the things she emphasizes. (Second IP #3)

Student #17: A room completely bare is very depressing and gives a rather cold feeling. (First IP #3)

It would seem that in a room that was bare, and where the discussion would seem to be teacher-oriented, that a real stifle of the imagination was taking place, and that children were not being allowed to exploit their creative powers. Also, I don't think that they would have the confidence and security in relation to their own work as the other children would have. (Second IP #3)

c. Incomplete Paragraph, #5. — The third paragraph that differentiated between the experimental and control groups begins as follows:

> The twenty children in the unstructured second grade classroom were fairly quiet until one boy snatched some blocks away from another child. Three or four others became involved in the loud dispute. One came to tell the teacher what had happened. The teacher .....

The scoring of responses is on two dimensions: (1) amount of responsibility delegated to the children for resolving disputes, and (2) ability to set limits for the classroom with flexibility and without punitive control or moral lectures.

The contrast between the responses of the experimental and control groups, as Table 10 indicates, is considerable. Not only are the average scores higher at the end of the term for both experimental groups on both variables than they are for the control groups, but all the changes that do take place are positive, whereas some of the changes in the control groups are negative.

Excerpts from typical protocols illustrate the positive and negative changes that took place. This pair of responses from a student in the experimental group shows a slight positive increase in delegation of responsibility and effectiveness in setting limits:

Student #4: She walked calmly over to the disturbed area and asked the child who had snatched the blocks away, "Why?" He didn't pay any attention to her until she had repeated his name several times and the other children had noticed the teacher's presence. He really didn't admit why, but just threw the blocks down and stomped off to another section of the classroom and picked up another activity as if nothing had happened. The teacher responded as if nothing had happened too and knew that he knew what he had done. (First, IP #5)

> .....must have been engrossed in something deeply if she didn't notice this and had to be told by another child. She went over and asked them to explain what happened. They didn't hear her or pay any attention to her, so she asked them if they could be calm enough and control themselves enough to explain to her what had happened. She asked them if they felt they had used "good judgment" in their decision for the loud dispute. They explained to her what happened and she said that they could continue the block playing if they did so in a sensible way, and if they felt they couldn't do this they could sit in their seats and work quietly at their desks. (Second, IP #5)

TABLE 10. — Final Ratings and Differences after Ten Weeks in Responses to Incomplete Paragraph #5 — Scored for Delegation of Authority and Manner of Setting Limits*

Student	Experimental group				Control group				
	Delegation		Manner		Student	Delegation		Manner	
	Rating	Diff.	Rating	Diff.		Rating	Diff.	Rating	Diff.
Group I (juniors)									
#1	5	0	5	+1	#11	3	0	4	0
2	4	+2	5	+3	12	1	0	4	0
3	5	0	5	+2	13	1	0	1	0
4	2	+1	2	+1	14	1	0	1	0
5	5	+3	5	+2	15	1	0	2	0
Average final rating	4.0		4.2			1.4		2.2	
Average difference		+1.2		+1.8			0		0
Group II (seniors)									
#6	5	0	5	0	#16	1	0	1	0
7	4	+3	4	0	17	1	-4	4	0
8	5	0	4	0	18	5	+4	3	+2
9	2	+1	5	+1	19	1	-3	3	-2
10	5	+3	5	+2	20	4	0	4	-1
Average final rating	4.2		4.6		2.2	2.2		3.0	
Average difference		+1.4		+0.6			-0.6		-0.2

*Difference is positive if second rating was higher.

Another student changes her answers considerably more. At first the teacher makes the decision and may have to punish a child:

Student #5: The action of the teacher would of course depend on her experience and knowledge of the children in the situation in the past. She should listen to the explanation of not only one child — but all the children involved and try to arrive at a decision that not only will allow the children (sic) but one that will bring the children who are fighting against one another to better terms.

> One child might have to be reprimanded. It depends on the situation. The important thing is that the child knows he is being treated fairly. (First, IP #5)

In the second response, authority is delegated to the children, and the teacher is flexible and non-punitive in guiding the children to a solution of the problem:

Student #5: I believe strongly that children of this age must begin to work things out for themselves — but they are NO longer babies and the teacher must not make decisions but rather act as a guide to help the children work these things out. As a guide there are several factors that would have to come into consideration — first her understanding of the children involved — does the boy who started this do this sort of thing frequently — was there any motivation for the boy snatching away the block. These things and many more would have to be taken into account before the teacher could guide the children so that they could make a decision about what was to be done. If the children are unjust and the teacher is aware of this, then I think she would intervene to talk with the children to point it out to them. (Second, IP #5)

In the responses of the control groups the predominant picture is: no change at all. The following pair of protocols is typical in this respect:

Student #16: The teacher asked both sides of the dispute to tell what they thought happened. She listened to each side openly and was willing to let every child describe his story completely. When she had heard both sides she was still unable to settle the dispute. But she explained what had been wrong about every action and why. In this way each child was able to understand his actions and the teacher's justice. (First, IP #5)

> The teacher asked each child involved to give her his version of what had happened. When she had heard everyone she was able to see what had happened. Someone had clearly been in the wrong. She took this opportunity to talk to all the children about the responsibilities of being a member of a group. She wanted them to understand that others' feelings must be respected and that when one is part of a group one cannot forget that people will have different ideas and feelings which must be remembered if everyone is to function in the group. (Second, IP #5)

Three students have lower scores at the end than at the beginning. The shift in their answers is toward greater teacher participation in the decision process and inflexibility in setting limits:

Student #17: .....at first just glanced over to the area where the commotion was taking place. She made sure that bodily harm was not taking place, and then she waited a couple of minutes to see if the argument resolved itself. If not, she quietly walked over and asked the boy why he had taken the blocks. Noticing the other children standing around, she asked them if they could think of a solution to the problem. She tried to act merely as a guide in letting the children solve the problem, and understand what their own feelings were. I do not care for unstructured classrooms, but I think I would have acted very similarly in this situation because I think that children should reason for themselves, and offer their solutions because they usually have the simplest and easiest solution to a problem when given the opportunity to think about it rather than being told just what to do. (First, IP #5)

The teacher walked over to where the dispute was taking place and asked who had been playing with the blocks first. Then she explained to the children that there were not enough blocks for everyone to use, and that if you wanted more that you had to ask for them. If X was still using them, then you would have to wait until he was finished. Then I would try and suggest some other activity that the child could engage in or suggest ways that he might use the few blocks that he had. (Second, IP #5)

Only one student in the control groups has a higher score on both variables at the end of the term:

Student #18: The teacher brought all the children involved in the dispute together to find out what happened. Although the emotional reaction would be to put the blame on the boy who is reported to have taken the blocks, I feel it is important to hear from him also. When a child is involved in the decision as to right and wrong and punishment, he is much more likely to abide by the ruling and feel the teacher is just and fair. (First, IP #5)

The teacher went quietly over to the group and asked them to relate the story. After hearing both sides they discussed as a group why this activity was not beneficial and what should be done. The teacher then left and let the second graders settle it. (Second IP #5)

d. Summary of Findings. — Important differences between the experimental and control groups emerge from this quantitative analysis. The findings indicate: (1) increased sensitivity to group dynamics, (2) a higher evaluation of children's discussions, and (3) a shift in their thinking about classroom management — with the shift characteristic of the experimental groups only.

2. Individual Patterns of Response Another way of analyzing the Student Teacher Paragraph Completion Test involves comparing the pattern of responses to each story before and after the student teaching experience, then looking for congruence of a student's answers from one paragraph completion to another — a complex and lengthy clinical procedure that yields a maturity score. In reading each story in the second set of responses, attention is focussed on evidence of change and growth in the following areas: (1) basis of commitment to teaching, (2) objectives of good teaching, (3) techniques for achieving teaching objectives, (4) sensitivity to others — adults, individual children, groups. Looking at the protocols in this fashion sometimes leads to a different picture than is obtained by scoring variables. For example, in the context of her answer to IP #1 a student may comment on the importance of the teacher's structuring situations to build up trusting relationship, but not make this explicit in answers to IP #3 or IP #5, which consequently are scored lower. This method of analyzing the test data leads to much more meaningful information about a student teacher's growth during her apprenticeship than the dimensional analysis, but it is extremely difficult to quantify.

An important and not unexpected finding emerges from the pattern analysis: differences in pattern between individuals are much greater than are changes in student teachers before and after apprenticeship. Highly individual patterns of opinion are revealed which have a remarkable degree of stability over the short period of time involved here. Even the language used to express ideas is strikingly constant, as the reader may have noted in some of the excerpts from paired protocols. Yet many students, in taking the test for the second time, spontaneously commented on having forgotten completely what they had written earlier, and genuinely wondered what they had said.

The contrast between two sets of responses to IP #1 — Student #3 being less mature than Student #15 — is an excellent illustration of the individuality and the stability in outlook characteristic of responses. The manner in which these two student teachers complete the other four paragraphs conveys equally impressive and stable evidence of their difference in maturity:

Student #3: Her initial reaction was one of shock. A teacher with many years experience must be very narrow minded to take such a view of young children. In fact the teacher must not trust anybody very much. She must not be very responsive to the needs of her children either. The student teacher felt that not to trust the children would show a lack of self-respect and respect for other individual's needs and characters. A basically insecure and paranoid person would feel the students were trying to embarrass or destroy her.

As a student teacher she tried to convey the feeling of trust and respect for the children through individual contact at first. She discussed her feelings about the classroom with the teacher. The student teacher felt the classroom structured to the point of rigidity where individuality and creativity were stifled. She asked to try teaching a lesson allowing for more individual choice and freedom, showing her trust in the children. (First IP #1)

She immediately felt that the teacher had very little trust for people and specifically for the children. The teacher seems to have a persecution complex and appears to be very paranoid. The teacher seems to have very shallow understanding of education and learning. "I wouldn't be surprised if her class were highly structured to keep the children in line," said the student teacher!! The teacher must not be very sensitive to her children or understand them very well if she is so obsessed with discipline. The teacher's own ego demands have become so completely important that the teacher is unable to give anything to her children and therefore is a terrible teacher. (Second IP #1)

While Student #3 may have an excellent understanding of the cooperating teacher's personality and of the children's needs, she disregards and appears to be insensitive to the effect of her own actions on the teacher and the functioning of the class. The other student teacher is cognizant of this complexity:

Student #15: A student teacher in this case may use this piece of advice to draw some conclusions about her teacher. It is reasonable that the teacher does not want a chaotic classroom as they would be unable to accomplish many things. However, the teacher's use of the phrases "upper hand", "enjoy scheming to embarrass and destroy...", may indicate the teacher's general inability to handle her class. Therefore, she feels she must protect herself from the children. The student teacher should doubt such intentions on the part of the children. She feels the necessity for the authority role of the teacher — but also, the necessity for teachers and students working together to learn and enjoy activities of the classroom. It is possible that by the time the student teacher enters the classroom a barrier had been formed between the children and the teacher. She must keep in mind the teacher's feelings on the matter — and perhaps work to ease the tension that exists. (First IP #1)

Because a student teacher is inexperienced in dealing with a class of children, it is very possible for her to join in with her cooperating teacher in adopting the same attitudes and techniques. Without realizing it, a student teacher can make the mistake of not trying to form her own opinions and ideas. This alertness is very important for any student teacher.

In reference to the above situation, the student teacher must consider this advice analytically. The cooperating teacher cited two faults of the children: (1) they're not to be trusted, and (2) they constantly try to destroy the teacher. Without much investigation, it may be assumed that this teacher is actually afraid of the children in her class. Consequently, she feels she must maintain "the upper hand", or a dictatorial control.

It is difficult because a student teacher cannot walk into a classroom and change it entirely. She must work herself into the already existing system. Her dealings with the children, as a whole, must somewhat coincide with that of her cooperating teacher — or else, she may develop an unbalance that may be hazardous to the functioning of the class into which she steps for only a short period of time. However, the student teacher in this situation must take it upon herself to be very observant: to speak with individual and small groups of children as much as possible. When she begins to take over lessons, etc., she can give the children a chance to take a more direct role. She must engender situations in which she and the children are working together. These kinds of things will foster trust and a more comfortable learning situation.

From time to time, she should inform her teacher of her progress and activities in this area. These discussions may have an effect on the cooperating teacher. (Second IP #1)

Pattern analysis, because its focus is on change in an individual, is a sensitive tool for detecting reliable evidence of growth. For example, the growth shown by the difference in Student #11's responses to IP #4 is also present in her paired completions of the three other paragraphs:

Student #11: Being a teacher means being in constant contact with young and active minds, most of which, I hope, will be eager to learn as they will be just starting school. Teaching should prove to be a constant challenge as the children will change from year to year and the world around us which needs explaining is ever-changing also. I have always liked young children very much and have found it stimulating to be around them. I like their frankness and their enthusiasm. Education is a field which I want to be a part of because the process of learning is quite exciting to me. I suppose that teaching young children could also be considered a kind of an escape for me because of my uneasiness when I am around adults as compared with children. I could not think of any other profession which I would enjoy as most of them include constant contact and working with other adults. I feel that in teaching I can really do something for somebody and make some sort of a contribution to our society, and thus I do want to become a teacher. (First IP #4)

Being a teacher is a challenging but exciting experience. Watching children learn is very exciting, but creating the atmosphere in which they may and will learn is a hard

> job. I enjoy children and am interested in their growth. One can be very honest with children, and they will respond with honesty, and the role of the teacher is to guide them toward learning rather than to spout information for them to absorb. This idea of the really honest interaction that can take place between a teacher and children is very appealing to me. I originally chose teaching as a profession as the only thing which I could possibly do. Since then I have realized that teaching is not quite as easy as that; however, I have also found it to be much more appealing. There is a great deal involved in being a teacher but a good part of it is just helping children to learn about living with other people.
>
> I had felt that going into teaching was a type of escape from dealing with adults; however, I have found that it is no escape from confronting this problem of mine. It is very important to deal with parents and administrators. My main reason for wanting to each is my interest in children. I feel that it also offers the change for me to be myself, and if that is not good enough, to then perhaps change accordingly. I am sure about my interest though I am not sure about my capability. (Second IP #4)

Here perceptions of the teaching situation and of herself have changed a great deal during her apprenticeship. Further gains in maturity with experience can be predicted confidently in her case.

These highly consistent patterns of opinion are impressive, especially since Dr. Bent and I found them to be strongly correlated with differences in the student teachers' self-confidence in assuming the teaching role and in their approach to such matters as directiveness, classroom management, and interest in and respect for individual differences. The pattern analysis, however, is not useful in this exploratory study because the results it yields are too individualized to report and too difficult to quantify meaningfully.

3. *Summary of Findings* The Student Teacher Paragraph Completion Test data show that *the major quantitative difference* between the experimental and control groups lies in their evaluation of peer-oriented small group discussions at the primary grade level. Some other important group differences in the direction anticipated emerged in response to IP #1 and IP #5: only the experimental group increased in sensitivity to group dynamics, including those of classroom management. Two incomplete paragraphs were non-discriminating: IP #2 and IP #4.

Analysis of the protocols was also made in terms of *patterns of opinion*, which call attention to an individual student's growth, not group differences. This method of examining the data helped in the intuitive assessment of what each student teacher in the experimental group had gained from Grouptalk training. It also led to some educated guesses about how the training might have affected students in the control groups — but to report the results of this line of reasoning would be reading tea leaves and an unwarranted invasion of privacy.

The potential usefulness of standardized paragraph completion projective tests for assessing some aspects of student teacher growth is, in itself, a challenging finding and goes beyond the value of the test in the present experimental context.

D. RATINGS OF GROUPTALK LEADERSHIP

How effective as Grouptalk leaders did the student teachers become? Did all of the students show increased skill? Which aspects of Grouptalk leadership were easy to learn, which hard?

1. Overall Results of Practice Table 11 gives, in terms of overall ratings, my judgment of the students' competence at the beginning and at the end of the practice-plus-feedback part of the Grouptalk training period. These scores represent the average of the ratings obtained on six variables, described in detail after the discussion of the student teachers' overall performance.

TABLE 11. — Overall Rating Scores on Grouptalk Leadership before and after Practice

Student	Ratings on leadership	
	Before	After
Group I (juniors)		
#1	2.2	3.0
2	3.6	4.7
3	1.5	3.8
4	2.3	4.2
5	2.5	4.3
Average rating	2.4	4.0
Group II (seniors)		
#6	2.3	2.6
7	2.5	4.3
8	2.8	4.6
9	3.5	5.0
10	2.5	2.5
Average rating	2.7	3.8
Average rating (Groups I and II)	2.6	3.9

In the first Grouptalk session, Table 11 indicates, the quality of the leadership was a little below average for both groups (2.6), but by the last sessions it was well above average (3.9). This difference in the group average before and after practice (+1.3) is impressive. The scores of most students show significant gains. Seven out of ten raised their score by more than one point, ending with a rating between 3 8 and 5.0. The largest individual gain was +2.3, i.e., Student #3 whose score jumped from 1.5 to 3.8. Some students did not improve spectacularly, ending the term as average or below in Grouptalk leadership.

The rating of Student #10 remained stable at 2.5 and two other students showed only small gains.

On the average the juniors and the seniors are quite similar in their initial capacity (2.4 and 2.7) and also in the level of competence achieved at the end (4.0 and 3.9). Although the initial range is greater in Group I (1.5 to 3.6) than in Group II (2.3 to 3.5), the situation is reversed at the end: Group I shows less variability and a smaller range (3.0 to 4.7) than Group II (2.5 to 5.0).

2. Six Variables of Grouptalk Leadership The foregoing scores on Grouptalk leadership are averages only. They are derived from ratings of performance on six variables. The first three variables relate to performance of the leadership role in accordance with the directives explained in the Manual for Grouptalk Leaders (Whipple, 1969), which the students had read before conducting their first sessions:

1. Ability to focus on group process only and avoid intervention in the content of the discussion
2. Ability to use a variety of techniques to keep the discussion both flowing and peer-oriented
3. Ability to help the group follow the rules of Grouptalk.

The next two variables concern the leader's responsiveness to the situation, the combination of intellectual and intuitive understanding that is required of good Grouptalk leadership:

4. Sensitivity to the needs, abilities and limitations of the individual children
5. Sensitivity to group dynamics and ability to promote cohesiveness.

The final variable concerns the quality of the interpersonal style:

6. Consistency in the maintenance of supportive, non-punitive authority.

My ratings attempted to take into consideration the difficulty of leading the particular children in each of the groups, i.e., I gave higher ratings for average performance with difficult groups than with easy groups. This I felt competent to do, since I had watched the children in their classroom and had led their first Grouptalk session.* There are no measures of the degree of difficulty of leading the various children's groups, nor measures of leadership ability before training. The first rating was given after the student teachers had participated in several adult sessions and read the Grouptalk manual; therefore it represents ability before practice in leadership, not before training.

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*Most groups included a "problem" child (i.e., one who was a source of disruption in the classroom, or had repeated a year, or was receiving special treatment, etc.). Nevertheless, some of these groups I found relatively easy to lead.

It is important to note that the second series of ratings refer to leadership of groups which were being asked to handle increasingly difficult tasks — such as deciding on their own Grouptalk question — hence the skill demanded of all the leaders became greater with time. In a very real sense, some learning and increase in skill had to take place for a student teacher to receive the same rating before and after practice, i.e., the final ratings systematically underestimate progress.

Selections from my comments about three student teachers after listening to their first and last Grouptalk sessions perhaps should make my ratings of their leadership performance more meaningful:

Student #2: .....Seems very much at ease (said her fears disappeared almost immediately). Relatively few content responses and evaluate reactions (said she heard herself saying "good idea" and knew she shouldn't, but taught to do that by classroom teacher). Asked children for response to what another one had said, with excellent results. Outgoing and sensitive. No problem children in the group. (First rating: 3.6)

.....With notably few exceptions, stays completely clear of content and promotes peer-directed discussion. Keeps her own interactions at a minimum, yet is directive when necessary. Group has achieved very high quality discussion, which they and leader obviously enjoy. Group has assumed most of leadership functions. (Second rating: 4.7)

Student #3: .....not very sensitive, response to children too rational .....interested primarily in brighter children and their ideas ..... Gets discussion confused by her own strong interactions with the children and lack of ability to follow the multiplicity and fluidity of their contributions..... not supportive of group effort — ends session with negative comment: "Since you don't have anything more to say, we'll listen to the replay." (First rating: 1.5)

.....Leader seems more secure: happier tone to her voice.....children enjoy session.....group's excellent discussion proceeds without frequent interruptions, though still a few unnecessary ones.....helps discussion keep going with spot summaries.....achieves contributions from everyone in the group, including the shyest member. Still could be more supportive and less intellectual in her approach. (Second rating: 3.8)

Student #5: .....Even though she does a fairly good job of leading discussion, group gets completely out of hand because of short attention span of problem child. Leader tries to push for too long a discussion under the circumstances — lack of flexibility. Also needs greater facility in helping children to expand on their ideas. Calm, firm and warm at all times. (First rating: 2.5)

> .....When group gets off subject, brings them back quickly and well. Makes good use of techniques that keep discussion directed to peer-group. Complimentary after effective exchange. Has managed to keep problem child from disrupting group, though child incapable of sustained participation. Excellent group cohesion, considering the circumstances. (Second rating: 4.3)

Most students, but not all, made gains on each of the leadership variables measured. Table 12 breaks the overall rating on leadership ability down into its component parts for the two experimental groups. The student teachers became particularly adept at confining their comments and expressions of enthusiasm or disapproval to the process of the discussion and not interacting in matters of content (2.8 to 4.1). They became more skillful in helping the children keep discussions going and in making them peer-oriented — not directed toward the leader (2.4 to 3.9). Their competence in guiding the children to observe the rules of Grouptalk increased (2.4 to 3.8). The student teachers became more aware of individual differences, quicker to understand the children's communications, both verbal and non-verbal (2.6 to 3.9). They also responded with much greater sensitivity to the group's interactions, the average gain in this category being the largest of all (from 2.1 to 3.8). Finally, there was some change, although a much smaller one, in interpersonal style (3.4 to 4.0). Some of the student teachers became more confident in the leadership role, more consistently non-punitive and supportive. In this one respect the Wheelock students had been above average as a group at the beginning, so there was less leeway for improvement.

These ratings, I should repeat, apply to leadership of children's groups which differed considerably in their initial cohesiveness. The quality of the student leadership, hence the ratings, might have been somewhat different had the groups been interchanged. Another point should be mentioned: my ratings do not always coincide with the student teacher's self-appraisal of competence. In two cases where I judged inadequate progress, the students thought they had made quite a bit. The eight other student teachers and I were in closer agreement.

3. Summary of Findings The data on changes in Grouptalk leadership skill with practice indicate large increases for seven of the ten student teachers. Towards the end they were much more adept in guiding complex small group interactions in accordance with the philosophy of Grouptalk technique than they had been with the initially simpler one. The other three students, although more competent than at the beginning, did not become highly accomplished Grouptalk leaders. The increase in skill for both juniors and seniors was most marked in learning to avoid content interactions. However, both groups showed some gains on all six leadership variables.

TABLE 12. — Average Group Ratings for Grouptalk Leadership on Six Variables before and after Practice

Leadership variables	Ratings on leadership					
	Group I (juniors)		Group II (seniors)		Both groups	
	Before	After	Before	After	Before	After
Functions of leader - avoids content	3.0	4.4	2.6	3.8	2.8	4.1
Sustains peer-directed discussion	2.4	4.2	2.4	3.6	2.4	3.9
Guidance in Grouptalk rules	2.2	4.0	2.6	3.6	2.4	3.8
Sensitivity to individuals	2.4	3.8	2.8	4.0	2.6	3.9
Group process	1.8	3.6	2.4	4.0	2.1	3.8
Inter-personal style	3.2	4.0	3.6	4.0	3.4	4.0
OVERALL RATING	2.5	4.0	2.7	3.8	2.6	3.9

E. ADULT GROUPTALKS

The selection of the questions for discussion in the adult Grouptalk sessions (cf., Appendix II) provided opportunities for increased understanding of children and the teaching process. To what extent did they contribute to the students' growth?

1. Juniors The following excerpts from the first experimental group's adult Grouptalk sessions illustrate changes of opinion, insight and growth, brought about through these discussions.

In Grouptalk #2 the question was, "How are the rules of Grouptalk learned?" Student #1 suggests that the rules should be defined: "It's hard to follow rules that aren't defined." The others, thinking back to the previous week's discussion, realize they had been following rules without any formal presentation of definitions. Student #2: "You learn by doing, so to speak: you learn the rules by carrying them out in a group situation." Student #1 assumes that children, however, need to have rules presented to them: "What about with children? Would that work if you have to tell them the rules first?" By the end of the discussion, Student #1 realizes how she herself has learned the rules of Grouptalk. This leads to a much clearer understanding of how she, as a teacher, might communicate them to a group of children without a long explanatory preamble.

The next Grouptalk session (#3) further solidifies her change in point of view. The question was, "What are the implications for classroom management of the method used to introduce you to Grouptalk?" The students, after reaching agreement on the meaning of the question, all help formulate how the method used to introduce them to Grouptalk applies to the classroom.

Student #1 summarizes their conclusion:

> The method is not telling on the part of the teacher, and having the child tell. And that could be for one child or 30 children. We were never told. We just did, and thought about it after. Applied to a classroom, I think that's the major implication.

Student #2 adds another point:

> Structure is placed there for the children to have to discover it. There's an opportunity, an environment, in which they can discover it instead of having it pointed out to them.

The fourth adult Grouptalk session took place after each of the student teachers had watched me introduce Grouptalk to the children in the second grade group she would lead. The question which I had selected called their attention to the way a teacher structures a specific learning situation differently in response to individual differences among the children and to differences in group cohesion. They compared their observations of my leadership technique in leading the different groups. This led to a better understanding of how flexibility in teaching takes both individual differences and group dynamics into account. Their summary brings out both points:

Student #1: We all had some similar and some.....quite a few different experiences with the kids in terms of how well they listened to each other, whether they were very verbal, whether there was one child who was particularly expressive, or everyone seemed to participate. Certain people had very quiet children. And all these qualities appeared in different Grouptalks.

Student #3: Also, we talked about the leader having to keep bringing up different points and trying to keep everything under control more in one Grouptalk than in another.

Student #4: And differences in how much the leader had to enter into the Grouptalk in order to keep it going.....

Student #1: And orient the children to what each individual child was saying to try and make the group more cohesive. Some groups seemed to be quite cohesive right from the beginning.

In summarizing the next Grouptalk session, concerned with Grouptalk leadership technique, Student #3 says:

> We've talked about discipline. We've talked about not expressing our own values on what they've said — like telling them, "That's a good idea," "That's a bad one," or like, "That idea is great." I think we've not only looked at the children. But we've also looked at ourselves .....how we can change to handle them better.

Grouptalk question #6, "What has Grouptalk taught you about children?" elicited an interesting interchange from which the following comments about second graders are drawn:

Student #1: It's taught me primarily that children are still self-centered to some degree at this age. They like to hear their own ideas, voices on the tape recorder. And I think that I haven't really zeroed in on how much they wanted to express themselves.....

Student #4: I found that they have the ability at this age to interact and that they can. And that there's a certain level on which they do. They're not only concerned with what the teacher thinks of what they're saying, but they are interested at this age with what one another is saying, and how their peers react.

Student #1: .....the other children can help build up their own self-image.

Student #2: .....there's also a need to still stick to fantasy and to still have fantasy a part of their everyday life, whereas the kinds in my third grade are a little more realistic and a little more social.....

Student #4: I learned a whole lot from the fact that they can honestly tell you how they would react in a situation, if they were called upon to react as an adult in a serious situation, what they would do. And they've got some very definite ideas about it.

Student #1: But in addition to that, they also rely an awful lot on releasing a lot of energy and a lot of tension through fantasy. Maybe for a lot of children in this age group it's an important part of their security.

Student #3: They're really capable of a lot more independence than I formerly thought they were. Because they don't need a step-by-step guidance. Just once they think they understand something, they just take it right over. And this really amazes me. They're capable of a lot.....they're so perceptive, too.....they remember sometimes better than I can. If you say something, you're going to have to remember. Like standards you set for discipline — you're going to have to remember what you've said because, if you loosen up, they're going to remember and pick you up on it.

Student #1: They have a great sense of fairness and justice. They see that something isn't fair — everyone isn't given the opportunity to express themselves — and chances are they'll let you know about it.

Student #4: Their personalities are very defined and they're very different..... just small things that you pick up in Grouptalk that you might not be able to notice anywhere else: the repetition of certain ideas in different questions, the reactions to certain types of situations..... In just a matter of three half-hour sessions that we've had, I'm surprised at how many things you can pick up that might take you months in the classroom..... You might never get an opportunity in the classroom, no matter how good a teacher you were, no matter how much individual attention and how much interaction there was with them talking, because this is something that's completely irrelevant to the classroom. You don't discuss the way you do in class. So you're getting a different side of the child.

As they talked together and shared insights they had gained, new learning was taking place.

2. Seniors The older group of student teachers show the same type of growth stimulated by the adult Grouptalk discussions. Even though these girls had already had a period of school apprenticeship the previous spring, their first session shows that they are still trying to formulate aspects of their own philosophy of education, to decide how much freedom of choice should be given to the individual child, and how much order the teacher should impose. All of them strongly reject the rigidly structured classroom. But beyond that, how much structure should a good classroom have? They are confused, as Student #8 indicates:

> How about those classrooms where you walk in and kids can choose what they want to do when they want to do it? And, if they don't want to finish what they're doing right now, they can go on to something else — is that an ordered classroom? Or is that a chaotic situation where they need restrictions? This is a question that's been bothering me.

In their second adult session they attempt to understand how they learned the rules of Grouptalk. They talk about learning through participation, discovery, then go beyond that to recognize that the discussion about the rules which they are having is also an important part of the learning process; furthermore, that the situation had to be carefully set up for them by the leader to accelerate their learning.

The two sessions subsequently devoted to discussions of Grouptalk leadership technique were helpful in directing their attention to the complexities of group dynamics. For the last session, the four student teachers present selected their own question, "What have we learned from Grouptalk?" The answers, they decided, would cover not only their own learning, but also what they thought the children in their groups had learned from being exposed to this new discussion technique. They listed a wide variety of things learned:

Student #9: .....your opinions don't come nearly as much into play as far as determining the success of the Grouptalk goals. It's more that you are following a prescribed method of dealing with children rather than supplying them with the richness of your own resources..... You're not fishing for ideas and trying to use yourself as a stimulator of ideas as much as you're just trying to get the children to realize a certain way of discussing, no matter what they're discussing.

Student #10: No matter how much knowledge the leader has about the topic being discussed, it really doesn't matter.....it's not relevant.

Student #7: You learn to let them have their own ideas. As a teacher, or as a leader, you learn to give up a lot of prescribed notions on what you think they should say and they should come out with. And you realize that they have their own ideas which are just as valid, if not more so, than yours.

There was general agreement that Grouptalk sessions help promote learning through discovery, that there are no right or wrong answers to the best questions chosen for discussion. But the argument became heated when they attempted to follow through the implications for classroom teaching. Should the teacher care whether the discovery process leads the child to the correct answer in such things as math and reading? One student teacher said she was not at all concerned about correct answers: "I believe that in teaching the process is more important than the content." (Student #6) Others were equally convinced that the goal of a math lesson also involves learning to get correct answers, that this is a fundamental part of teaching. Grouptalk in this sense also has an end product: to better equip the children to know how to carry on a discussion with each other. The children learned this:

Student #9: .....because of the way we guided them, you know: "Stay relevant," "Do this," "Do that," "Don't do that," "That was good," "That was very good." Encouraging them .....discouraging them from talking at the same time. So yeah, we teach them that.

All agreed that they had become more aware of the need for structuring situations in order to promote learning through discovery, that children's trial and error needs guidance:

Student #10: I think the children are learning also through their mistakes how to talk to other children, how to share their time, how to listen to others.....especially by hearing their tape replayed.

There was greater awareness of the conceptual development of second graders and how this affects the sensitive teacher. The importance of double checking the adequacy of communication was stressed:

Student #7: I think we've learned about how children think about different things and how at a certain age level they have no concept of what something meant or how they could define words. They don't.....at this age they cannot do it. They don't see it at all. I found that mainly because of the definitions.....it isn't the same as how a child at a higher level, grade, understands things..... So when it's carried into the classroom, you realize when you say something, it may seem perfectly logical to you, but they don't understand it the same way. Then they really don't know..... like time concepts: it may seem logical to you that, for example, they should know to come back in ten minutes. But they don't understand it and they'll come back in two minutes. I think there are things you should approach differently or should word differently. If you say certain things you are just not going to be understood. And you should understand why they're not being understood; not just because the children are stubborn or ignorant, it's just that at this stage.....they haven't got all the background for it.

Small group interaction was better understood:

Student #10: I've seen a lot in how a small group interacts, a small social unit will interact with one another, which is really important in the classroom, especially in a personal situation, where it is basically socially oriented, where their interaction is very important..... I'm learning when to cut off a conversation when the children start getting restless and their attention is gone. I'm learning how and when to cut them off.....

Everyone learned that choosing a good question for the Grouptalk is very difficult. A question that one group found exciting might lead to scapegoating in another:

Student #7: I think it's hard. It really takes sitting down and thinking about each one of those children individually and then thinking of each one of those children interacting with the group, to get a question that's going to interest all of them, that's going to try to avoid some of the problems that they run into with each other.

3. Summary of Findings The content of the adult sessions of both experimental groups suggests that the Grouptalk experience contributed in a number of important ways to the students' education as teachers, and that participation in the adult Grouptalks was an essential part of the learning process.

F. FINAL PAPER

Most students took very seriously their individual studies assignment, even though performance in the student teaching course is not given an official grade, just pass-fail. They knew that their gains from the individual project would be a function of what they put into it and that it would help in their self-evaluation as well as supply data for this exploratory study. Here was an opportunity to relate educational theory to practice on the basis of their own experience. How did the experimental and control groups react to this opportunity to learn?

1. Control Groups The projects selected by the first group of control student teachers covered a variety of areas: creative writing, oral expression, creative dramatics and social studies. The seniors worked in the fields of individualized reading, science, creative speaking and art appreciation. There was pressure from Dr. Bent to teach a small group of children only, not the entire class. But, in view of the varying needs of the cooperating teachers, this request could not be made mandatory. Most of the studies but not all involved teaching the children something. Several created opportunities for self-expression and one was primarily observational.

With the exception of one very long paper of 14,000 words, the reports run about 3,000 words. In the introduction there is a statement of the project's relevance to the student teacher's interests and to the education of young children. Usually there are numerous references to what educators have written on the topics. The bulk of most papers consists of detailed descriptions of the project which tend to be chronological. There are many sensitive portraits of individual children and accounts of their activities. But, with two notable exceptions, answers are sparse to the four assigned questions: (1) What did the individual children learn? (2) What changes took place in the group? (3) What did you learn about children? and (4) How has your self-image been affected?

Was this failure to supply the data so essential to the experimental study perhaps because of the character of the projects undertaken? Only one of the student teachers in the first control group worked exclusively with a small group. The others taught a unit to the entire class and made special observations on four or five children who, for the most part, did not constitute an interacting group. It was difficult, if not impossible, under these circumstances to talk about group dynamics. However, three of the students could have focussed far more than they did on the other assigned questions. Perhaps our instructions for writing the final paper had been insufficiently stressed? All the students in the second control group worked part of the time with small groups, their plans were submitted before mid-term, and their attention was carefully drawn to the questions they were supposed to answer. Yet they too were erratic in commenting about what the children had learned, changes in the groups they worked with, what their individual study had taught them about children, and how it had affected their self-image as a teacher. Why? Was instruction in Grouptalk techniques needed in order to focus their attention on these areas?

In presenting my evaluation of the final papers, I decided to minimize interpretation by quoting extensively. In many cases I have included all of the relevant quotations from all of the papers. Where I have not done this, I have indicated either that the quotation is the student's typical response or that other students have included similar material. It should, therefore, be possible for the reader to draw his own conclusions from the data and independently to evaluate Grouptalk as a teacher training instrument.

a. Observations on What the Children Learned. — Six of the ten control students' answers to this question convey the impression of great sensitivity to individual differences. Two are moderately detailed. One student failed to say anything about the children in her group. Another describes them primarily as a unit:

Student #18: These were all children I had observed as alert, aware of many varied topics, and most verbal. I felt that for the benefit of the whole group, I should choose children who would be interested and would contribute to the discussion.

This student had no interest in differentiating among the children or in teaching them, so she sidestepped the question of what they may have learned. She wanted to learn more about second graders' abilities, using as source material the responses verbal children would make to a certain type of lesson.

Statements about what the children learned cover a variety of areas. They touch on greater social awareness, greater self-expression, gains in knowledge or skills related to the specific ongoing project. Some children learned to write better, some to read better. Some learned facts in a social studies project. Others learned about communication and had a chance to talk to each other and to the rest of the class. Some learned how to participate more creatively in informal dramatics. It is impossible, however, in reading half of these accounts, to follow the progress of an individual child, to see in what particular way the experience had been enriching for him:

Student #11: I was sorry that I could not examine these children's development more closely, but for the type of project I chose, I thought it more beneficial to work with the whole class at once.

Student #16: As I could only work with my group an average of 45 minutes per week for five weeks, it is impossible to measure any real overall gains. I can honestly say that James' attitude was one of sincere respect for me in the classroom — a direct result, I feel, from Creative Dramatic work. It is difficult to say that John's image changed — but I think if this program was carried out over a longer, more concentrated period of time, it definitely would help my Cherubs. Again, a marked change in Donna and Ellen could not possibly be noted. Robert's attitude on our last meeting was one of complete alienation from the

> rest of us. He had work to do back in the room and he wanted to be there getting it done.

The way a small group of children in a creative writing project are encouraged to express themselves reveals unusual sensitivity to their needs. But, nothing specific is said about what they learned.

In four reports only is an attempt made to assess what each individual has or has not gained from the unit. The children in an individualized reading program, for example, are described with great sensitivity and taught in terms of their individual needs. Some made progress in reading, others did not; each one's progess is noted:

> Student #19: He has difficulty in seeking and choosing a suitable book. Russell lacks confidence in his reading and takes time comprehending questions and answering them.
>
> Although Russell understands the procedure of his individual reading group, he feels loneliness, insecurity in it, due to his incompetent manner. He fails to know where security exists in the program, as he hesitates and is frightened to confide in me. Russell interacts with his peers, but often his peers feel burdened by Russell's feelings of insecurity and loneliness. I am uncertain as to how to deal with Russell and his feelings. I observed Russell for a long while before involving myself with him. Presently, I seek out Russell and inquire about his reading progress, his problems, his life outside school. It is difficult to perceive the effect of my actions on Russell, as he is naturally so withdrawn and meek.

Three other final papers focus closely on what individual children learned. Especially notable in this respect is the report of one student teacher whose lengthy observations are not quoted, but who describes her project as follows:

> Student #15: In this study I set out to measure how much the children would learn in a series of lessons on the community. What I also wanted to investigate was how the social learning of a child might develop through the content of the lessons on community and as a result of the methods through which the community would be studied. I conceived of social learnings as the controls of behavior which a person develops as he lives through and reacts to social situations and in terms of the ways in which he would solve social problems. I saw social learnings as the growing ease with which a child would become a contributing member of a group. . . . .

She worked with the whole class, broken down into small groups, and made methodical observations of the social learning of five children. Their individual progress is documented in detail. She makes it abundantly clear to the reader that she understands the relationship between each of the children's social learning development and what he or she was able to learn from the social studies unit.

In one unit, taught to the entire class which was divided into small activity groups, the student teacher selected for her observations the child who was the leader of each of the small groups. She, too, writes in detail about what each of these children learned.

The student teacher who conducted small group lessons in reading readiness with the four slowest readers in her first grade class also describes the gains each child made:

Student #20: Tim, the fourth member of the group, is a very disturbed child. He was born with no right hand and is tremendously self-conscious about it. His behavior at the beginning of the term consisted of tears and complete withdrawal from the group. Tim could not function as part of the group and could not function alone. When asked to do anything alone he would burst into tears. When the whole group would begin a project he would cry because he didn't want to do it. Tim very often would be sitting in the reading group and be too self-conscious to get up and go to the bathroom, and as a result would wet his pants. Tim never would do any activity in the classroom except look at a book.

Now, Tim has managed to loosen up and relax a little. While in the small group he will once in a while add something. He still cries almost every day, but the pants-wetting has gone down a lot. For the first time, I got him to dictate a story to me, and he even drew a picture of the story. Any suggestion of drawing used to bring immediate tears. Tim still finds it extremely difficult communicating with anyone except perhaps Michael. Even when he is upset, he cannot explain what is wrong. He will agree to any suggestion made by the teacher as to what the trouble is.

b. Observations on Changes in the Group. -- Three of the eight final papers that refer to changes in the group (in two reports this topic is omitted entirely) refer only briefly to changes in skill or information level and make little or no reference to group dynamics, whether in a small group or the classroom. All relevant passages are quoted:

Student #12: They not only gained new information about magnets and fish, but also they made progress in asking better questions. The children had no problem in working together and shared everything they did and learned with each other. The areas we studied in our group I think did not only benefit these four children but also the entire class. . . . . They would always share information they knew or would point out something exciting (in their books that were left in class). The entire class also gained from the questions and discussions when I showed the filmstrip.

Student #19: In most cases there was marked improvement (in reading readiness) from the beginning to the end of the semester.

> The children began to be more verbal, to have more self-confidence and to feel more comfortable and secure in the classroom.

Another project involved a small number of children working together — an assemblage that did not really constitute a group:

Student #20: Each child works at an individual level and is comfortable knowing there is no competition involved. Daily, I manage to check children on books, listen to their reading, and carry on individual or group discussions on special books or special events which excite the children.

I perceive individual children who are burdened by vowels and spelling in their reading. In small groups, we talk about the importance of vowels and spelling. Consequently, I give small drills and exercises to small groups to develop necessary skills helpful in reading.

Let us turn now to the four reports which do mention changes that took place in the group, whether small or large. Comments in a final paper on a creative dramatics unit are confined to the following observations:

Student #16: There now exists (third session) some degree of interaction and comfort among my group. One particular incident when they were completely inhibited and even whispered was when another class was within listening distance while by themselves they are as natural as can be. They use much freedom of speech, never thinking twice before saying an impulsive thought. They seem to be better able to identify with others as they are now exhibiting more insight into people's needs and feelings. When Donna was struggling with her son Robert, we put ourselves in our mothers' place and discussed how they must feel when we do certain things at home. Most of them hadn't realized up to then that Mom had feelings too. Another interesting observation is that these children see different ways of viewing a similar instance.

In a unit designed to make communication an integral part of the school day, the spontaneous contributions of the children largely determined the specific direction the lesson took:

Student #17: In the lessons dealing with the telephone it seemed more then ever that we were all doing it together. I was not standing up in front of the children, directing. All of the children gave ideas which contributed to the progress of the lesson. The experiments we conducted to see which combination of materials was most successful were not pre-planned.

> I had not planned to listen to a part of a symphony and try to imitate the different instruments as we heard them. This was sort of a spontaneous thing. Out of this came the idea of the conductor because one child was standing up making the motions of a conductor. This idea was extended during the term as the class learned new songs. Invariably, one child would take the role of the conductor.

Some parts of her unit merged into the daily business of the class, illustrating that the children had learned from it as a group. Peer-oriented, spontaneous communication increased markedly in Student #17's classroom:

> The unit of communication was set up in an area of the classroom in which all of the materials that I brought in and that we made would be available at any time. Most children learned how to use the tape recorder. They talked into it, read into it, and often we recorded their singing. . . . . At very odd times, certain children would refer to something we had discussed in one of our communication lessons.

In another project, a series of activities designed to promote creative speaking, the leader first tried to stimulate discussion by showing some pictures of classroom situations and asking questions about them. Two passages only relate to group dynamics:

Student #14: The children all responded eagerly to the questions, in fact, all talking together. Ted especially wanted to dominate the conversation. They had little consideration for listening to each other, which was unusual for Cathie and David.

Another time these children wrote about their feelings:

> While we discussed these feelings, I found that the children were beginning to take a greater interest in what each other was saying. Ted was not trying to interrupt each child. Cathie, who was still a little shy, would often take a longer period of time before she would be able to tell her story. She usually waited until the others were finished.

Student #15, who undertook the ambitious project on social learning, made careful, extensive observations of five children interacting in a large variety of group situations in the classroom. In order to fulfill the requirements of the final report, she brought these five children together as one group on three different occasions. Her comments about group dynamics are perceptive:

> The first time that we worked together they were very enthusiastic and eager to get the work done. We proceeded in an orderly manner, taking votes and having one person at a time present their proposal. They listened to each

> other and responded in terms of what another had said. The next time that we began to work on this it was not as constructive a session. To start off Peter announced that he wanted to quit because he would rather go to the library. After convincing him to stay, the rest of the group was restless, and they all had their own ideas which could be outvoted or compromised. By the third session all five of them came up and told me that they were quitting. They came up in a group and said that they wanted to go to the library. They were uncontrollable for the short time that I kept them.
>
> I feel that taking five children out of the total group to work together was inappropriate in this classroom. When it is necessary to be apart from the rest of the class to get the work done, it is hard to have more than one session. The time when the whole class was working in different groups was fine, but there was not much point in working with these five children in an isolated situation because they didn't like it after the novelty wore off. Unless the children feel comfortable they will not react normally or positively so this separation served no purpose except furthering the social studies plan.

This excerpt suggests the possibility that the student teacher lacked experience and skill in leading small groups, although she gained enormous insight into group dynamics from her reading for her project and from her ambitious program of observation.

c. Increased Understanding of Children. — Only five of these ten final papers refer to how her individual study increased the student teacher's understanding of children. The total absence of comments in the other half certainly cannot be taken to indicate the project taught them nothing. But it does seem reasonable to conclude that these students are not interested in relating their classroom activities — what and how they teach children — to their own growth in understanding. Student teaching is not seen as an opportunity to test the validity of their accumulated knowledge about children.

One student's entire answer to the third question is that she came to appreciate that first grade children need to be involved in activities to encourage learning rather than being asked to verbalize:

Student #11: This experience has given me a greater understanding of children because I have learned that for this particular age group, six and seven year olds, the children need great involvement. They need to have action which films provide, body movement and music which appeals to them sensually, and something creative to make. They can learn more in these terms than they can by verbalizing which is limited at this age level. My fiasco with the Mexican lesson was due to many causes but particularly because of lack of involvement both verbally and creatively. I was not motivating or stimulating them the way I should

> have been able to and they easily became bored. My success with the African study made me understand what children need to stimulate their intellect and senses.

Another student teacher (#18) summarizes what her project — on the responses of young children to their exposure to art — taught her:

> To these children, color had the greatest significance. they related to it emotionally and through personal experience. A sense of art history was alien to them because of a general lack of time and history. Style was also alien because they had never personally experienced a clear change of style in their own creativity.

The comments of a third (Student #12) are as follows:

> I learned a great deal from the children. I was unsure how much they would understand and remember, but I discovered their capacity for understanding almost limitless. . . . . I was also amazed that the children never seemed bored by the length of time we spent at our meetings and in fact hated to leave.

In marked contrast to the brevity of this statement are the four pages written by Student #20. They could have been written, however, by someone who had had access to a library only. There is almost no indication in this excellent account that working with individual children taught her anything.

One final paper only in the control-group has a lengthy, explicit answer to the question: What did the project contribute to your understanding of children? The following excerpt albeit lengthy leaves out most of the numerous observations which led to student #15's deepening understanding:

> This study has made me more alert to the needs of individual children. It has made me look at five children in a certain frame of reference and harder than I might have at the rest of the class as individuals. I have begun to see more what a terribly hard challenge social learning is to children and that social learning does not stop when a child shares his shovel in the sandbox! . . . . Through this study I have come to realize how very different some situations seem to children which to me appear quite similar. Some children cannot transfer the skills of discussion from a large group situation to a small group one and others cannot do it in the reverse order. The number of children involved in an activity greatly influences the performance of certain children. The presence or absence of adult supervision changes the child's perspective on the situation a good deal more than I had realized.

I have come to recognize the fact that children each have their own strengths and weaknesses when it comes to cooperating with a group or learning new facts or concepts. For instance, on first glance I figured that Paul was a very congenial boy; I had never seen him in any fights or serious arguments with other children. However, when he was put into a small group and asked to work with them, it was obvious that he had not yet learned to cooperate but only to separate himself from others. Jon seemed at first to be a very smart boy and way ahead of his classmates because of his large vocabulary, and he seemed always to be an eager participator in discussions. It seemed that he was always alert and responsive; however, when putting him into a small group situation, I found him to be lacking in many of the concepts what lay behind the vocabulary words. It also became very evident that he would very often let his mind wander and lose complete contact with the train of thought of the discussion and would not try to participate in small group discussions.

My own understanding of children has deepened as a result of my being forced to observe five children very closely, to record their behavior, and then to analyze it. I had to examine how much a child learned in different situations and thus was led to seeing what type of situation was most conducive to his learning. Each child has a different type of situation in which he can best learn and often times he will attempt to create this situation if he desires to learn or feels pressured to. Children are individualists and strive to maintain this individuality even at the expense of order and peaceful coexistence with the rest of the class.

There are children who may very well desire to be good and to do what is expected of them, but who simply do not have the self-discipline to do so. It is these children who need a good deal of help rather than the constant frustration of being reprimanded. . . . . Children can feel a great deal of pressure from an adult figure even when the adult thinks that she is being friendly and supportive. I feel that I have found that too much pressure on a child is a terribly negative force of learning. They need someone to have high expectations, but they need to know that their weaknesses are understood and that they have support for their efforts.

It has become increasingly evident to me that all aspects of a child's life are very interdependent. Within academics, the child who cannot read but has the potential to understand math with tutoring help cannot do the math in the classroom. From having attempted to measure both social learning and lesson content learning, I have also seen the connection between where a child is in his social learning development and how well be can learn new facts and ideas about any subject area. It seems, as may be expected,

> that the better adjusted the child is to the classroom situations, or with having to restrict his behavior according to the number of other children around, the better he will learn. This goes along with the idea which I had already been exposed to that children must be comfortable in order to best be able to learn. I had not, however, recognized this dimension of "comfort."
>
> I have begun to understand that children have immediate needs, such as the need for support in a difficult situation, but they also have long-range needs which may contradict what seem to be their immediate needs.
>
> I have found that there are so many factors influencing a child's behavior that it is practically impossible to predict behavior and that measuring improvement or change of behavior is very difficult because it may just be for the moment. So often children cannot be generalized about; they want to be understood for what they are and cannot stand to be evaluated as something other than what they are.

d. Changes in Self-image as Teacher. — Two students (#13 and #18) made no comments about the effect of their individual study on their self-image as teachers. Four others communicate very little. Student #19 gives this brief generalization:

> My study has familiarized me with a child's uniqueness in personality, ability, interests, needs, and progress. I have learned each child has individual feelings. My sensitivity to other people and their feelings and needs has developed through my work with my second grade readers. I believe sensitivity is a necessity to all teachers of young children.

Student #16 refers only to a decision to include Creative Dramatics in her own classroom:

> I do feel that Creative Dramatics should have its place in every classroom because given time it is a sure way for children to learn more about themselves and others, develop emotional stability, confidence and creative expression, body coordination, and it contributes toward a philosophy of living. I will certainly have it in my classroom.

Learning something important about teaching techniques is specifically related to her experience in the classroom once by Student #20 whose report showed great gains in knowledge from her reading:

> When I first began to work with the group, I used alphabet books and tried to introduce new letters to them each week. The progress was almost non-existent, so, after doing some reading of readiness programs I decided my

> approach was wrong. From then on we began talking, telling stories, and playing many more games. I focused more on getting the group to feel comfortable talking together than on the alphabet. The children in the group reacted very favorably to this change in tactics.

Student #12 feels she learned how to strike a good balance between exposure and depth:

> I am glad now that I decided not to definitely plan a topic for each session. I was unsure whether to expose the children to many different areas or to study a few in depth. Which is better, exposure of depth? I realize we could have touched upon a new topic every time we met, and that the children would have been exposed to a great many ideas and concepts. But I felt and now do believe that to follow up questions and ideas and to get involved in something is extremely important and valuable. I also believe that I combined exposure and depth to a certain degree in that the children were exposed to a great deal in a small subject area.

This same tendency to try to include too much in one lesson is mentioned by Student #17, who explains with several illustrations how she learned:

1. The necessity of taking cues from the children, and
2. Being able to extend an idea, such as communication, into many different areas of the classroom taught throughout each day.

She felt she became much more flexible and responsive to the children's cues in the course of a lesson, and gained confidence in herself as a teacher: "I found I had the ability to interest them in something and also the ability to bring it up again at opportune moments."

Only three students mention numerous changes in their self-image, which they attribute to their interaction with the children.Student #11 writes:

> I feel much more confident in my knowledge and teaching ability since I have learned some ways of reaching children and of understanding them better. To mention what might appear as a minor point, in the beginning I did not realize the importance of seating. When I worked in a small space where the children were closer together, temptations to fool and talk became greater. Also, certain rules have to be laid down. For instance, only one child should be talking at once and then only when his hand has been raised. I found that you cannot create interest and enthusiasm in the midst of noise and confusion. If the children know that you mean business and that you will follow through if need be, their attitude seems to improve. In addition, I learned that you cannot reach children when you are

> supplying all the information and not allowing them to tell you what they think. It is from their knowledge that a teacher should be working; guiding and adding information only when needed. This can only help make a child more inquisitive. It is important for both the student and the teacher to be involved in a learning experience. I believe this to be the key to the art of teaching.
>
> Children need goals set for them in order for learning to take place. For instance, by telling the children they would have the opportunity to wear African clothes and could dance if they participated in discussion gave them the necessary motivation to listen and learn. I realize that this is learning by reward but sometimes children need just such a stimuli to motivate them.
>
> It has been through my learning certain techniques to use when maintaining the control of the group, as well as my increasing awareness of what materials and ideas stimulate children, that makes me feel more confident in my ability to teach.

Student #14 speaks of an increased awareness of the effect of her teaching style on children's learning, the importance and the difficulty of taking individual differences into account when planning lessons and some helpful techniques she learned:

> I am beginning to realize more and more how important it is to listen to children, and to encourage them in their oral expression. If you do not have the time to listen to a child, he will sense this and perhaps think that what he has to say is not very important, and will become increasingly more silent.
>
> I have also tried to listen to myself talk, and to develop better speech habits. Children are always showing you pictures or things they have made. Instead of using the same old trite expressions such as "pretty" or "nice," I try to add other vivid descriptional words or to explain to the children why I like something in more than just a word. In this way they are exposed not only to new words, but by my pointing out certain things that I think are clever, perhaps it will help to make them more aware of such things as they observe and describe.
>
> When reading aloud to the children, I also try extremely hard to speak with expression and clarity so that their imaginations and interest will be spurred just by the sound of my voice. I think that this also helps them to develop certain standards for themselves when they are speaking or reading aloud.

> Another thing that I became more aware of through this study is how important it is to have children see the relationship between what they are doing at the present and the already established goals of the teacher.
>
> It is also important to remember the individual differences in children when planning certain activities. Some children naturally have a higher verbal ability than others. There are many reasons that may be the cause for this; for example, perhaps no one at home listens to the child. But whatever the reason, the program must be arranged in a way that will take into account all personalities. I found this to be one of the most difficult parts of teaching.
>
> Through carrying out this type of study, I think I became more aware of certain techniques to use. For example, if a child says something cleverly or puts words together in an unusual way, I try to point these things out to the child. Or if a child is telling a story, I might stop him for just a second, and let the other children try and visualize what he has just said. This not only gives the others a chance to use their imaginations, but it will also show the storyteller just how anxious the children are for him to continue as they "beg him" to go on. Children need this type of encouragement. It helps them to become more confident and secure.

The only one in the control group who really describes her educational goals as markedly changed because of the observational part of her project is Student #15. Her self-image as a teacher is more autonomous and realistic:

> Having had to look at five individual children in detail rather than just observing 23 children as a body of students has changed my self-image as a teacher. From looking closely into the make-up of the children and trying to determine their personal needs and their growth patterns, I have discovered that as a teacher I cannot be just an eternal fountain of information, but must be a total, functioning, living and feeling human being. Before beginning this teaching experience, I was all set to preach the necessity of this type of teacher, but I never could really fit myself into the role. I did not have a clear picture of what it meant. Now I feel that the information or content of the subject matter I teach is really secondary to the interaction, in any situation, which I have with the children. I picture my classroom as needing to be more of a lesson in living than a lesson in the skills of reading, as they will follow. I have come to realize how very important it is to children to have what transpires in school relate closely to what they experience outside of school.

From having examined these five children quite closely and just from having observed them, I now do not see my role as a teacher as being so removed from the role of being a student. I picture myself as being more of a moderator and a servant of the children. Brogan and Miel in More than Social Studies state that "democratic socialization is too central a reponsibility and too complicated an undertaking to be confined to a portion of the curriculum such as social studies, even were social studies programs to become ideal." This idea that democratic socialization of children is so important and must take more than one part of one day or week to be worked on appeals to me. During this semester I have seen myself becoming more concerned with this and examining the classroom to see where it could be incorporated if it is not already. This makes my conception of being a teacher much more appealing and exciting and less stagnating. Within this image of a teacher I can better fit myself as it allows for a good deal of honesty on the part of the teacher; in other words, I will not have to pretend that I am something which I am not in order to gain the respect of the children. I am no longer trying to fit myself into the mold of a teacher who is all-knowing or is afraid to let the children know otherwise. . . . . I have readjusted my self-image as a teacher from being somewhat removed from the children to being totally involved in their growth toward becoming total human beings. I do not picture my classroom as being a particularly dynamic one, if this is what I might have conveyed, but rather hopefully a comfortable one.

My self-image as a teacher was rather confused prior to this experience. I figured that I would either be very rigid to protect myself against the children finding out how little I know about anything or sort of over-understanding so that they would like me enough to do as I wished. Neither of these could really have lasted because neither of them was really "me." I think that in between these two conceptions lies one closer to the truth or reality of me as a teacher. I now see myself as needing to be quite objective and demanding as well as being supportive. I think that I have to be honest and give children the credit they deserve for being individuals capable of handling themselves well. Perhaps this means raising my expectations of the children and lowering or changing my expectations of myself as a teacher. . . . .

I was not too sure before entering this experience how I would be able to help the children develop tools of communication; however, it seems to be enough to show that you approve of it without needing to set the example. In the first grade this is an especially important talent to foster as I see myself as the teacher having to evaluate how much a child is learning without the aid of direct

> testing. It will be important that the children can apply certain learned concepts to different situations and then communicate this to me or their fellow classmates. If the children cannot communicate effectively, I will have an awfully hard time determining just what they are getting out of the lessons. Therefore, I feel that my self-image of myself as a teacher has become somewhat more realistic from this term's experience and doing this study.

The important changes in self-image regarding teaching goals and techniques which this student reports are not characteristic of the control group as a whole. In fact, they are unique. Undoubtedly other students matured significantly during their apprenticeship, but no one else attributed her growth to working on an individual project with a small group of children.

e. Quantitative Summary. — Table 13 indicates in quantitative fashion how well the student teachers in the control group answered each of the four assigned questions, summarizing in another way the material presented in the preceding sections.

TABLE 13. — Ratings of Control Group's Reponses to Four Questions Assigned on Final Report

Student	Assigned question							Total score
	1. Individual children		2. Group changes	3. Knowledge of children	4. Changes in self-image			
	Description	Learning			Goals	Means	Self-confidence	
#11	2	-	1	2	5	4	4	18
12	1	2	1	2	-	1	-	7
13	5	3	-	-	-	-	-	8
14	4	2	2	-	1	5	1	15
15	5	5	3	5	5	5	3	31
16	5	2	2	-	2	1	-	12
17	5	5	-	-	4	4	5	23
18	1	-	-	3	-	-	-	4
19	5	5	-	-	-	1	1	12
20	5	5	1	2	-	4	-	17
Av. rating	3.8	2.9	1.0	1.4	1.7	2.5	1.4	14.7

The 5 point scale ratings relate to the quality of the responses given; a minus sign (-) indicates no response. In category (1), Individual children, the first rating refers to the detailed, sensitive descriptions of individuals, the second to reports on what they learned from the unit.

In category (2), Group changes, the rating is for attention to group dynamics. The ratings in category (3), Knowledge of children, concern what the student teachers learned about children from carrying out the project in class, not from the background material. Finally, the ratings in category (4), Changes in self-image, refer to changes attributed to the student's interaction with the children in their study. The three sub-categories relate to (a) educational goals, (b) teaching techniques and (c) self-confidence.

Table 13 shows that most of the students gave good answers to the first question insofar as they described the children they observed in detail and with sensitivity (average rating: 3.8). The students were somewhat less conscientious in stating what they thought these children had learned from participating in the project (2.9). Only half of the control group described ways in which their individual study related to their thinking about teaching techniques. On the other four variables, responses were even more spotty. One student only (#15), on the basis of her final paper, could be said to have made considerable gains in teaching potential by persuing her individual study (total score: 31).

f. Summary of Findings. — With some exceptions here and there, the final papers written by the juniors and seniors in the control group make it difficult to evaluate the contribution that the special project made to their understanding both of children and group dynamics and of their own growth as teachers. How much did they know before they began? Did carrying out the project teach them something in addition to what they learned from their reading? In all probability they learned much more from this opportunity to pursue an independent study than they communicate, and enjoyed doing it — even though there is only one direct expression of enthusiasm:

> I enjoyed this study very much and I think it was both beneficial to me as a teacher and to the children as they continue to develop and emerge as separate individuals.

But, as a group, in their final papers they do not relate their work with children in their individual study either to what they or to what the children learned. With three exceptions, one extraordinarily detailed, they do not communicate a sense of growth toward their ideal of the teacher's role. How do the final reports of the Grouptalk trainees compare with these?

2. Experimental Groups Enthusiasm for the project was unanimous. Whether or not Grouptalk training actually added significantly to their teacher training, the student teachers certainly say it did, and give the impression that they mean what they say in their unsolicited evaluations:

Student #3: All in all, Grouptalk brings out an awful lot of self-awareness and dimensions on to teaching which can only enhance and may improve our ability to teach. For this reason I think Grouptalk training should definitely be available to student teachers. It has, without a doubt, made my experience richer and more worthwhile.

Student #6: Because of the approach Grouptalk takes, it influences a student teacher in ways that a classroom situation cannot. Grouptalk was a valuable and educational experience for me, and I recommend that it be used to supplement the classroom experience.

Student #5: It is almost impossible to state how much enjoyment and knowledge I have gained from my Grouptalk experience. I feel it is invaluable for any student in preparation for teaching.

Student #7: I consider this past Grouptalk experience as a valuable one and would like to see it continued. I went into Grouptalk thinking that the children were really going to learn a lot. I'm the one who learned the most!

Student #4: Grouptalk has been a fantastic experience, one that I will carry with me into my own classroom.

The final papers range in length from about 1,000 to over 7,000 words, roughly the same as the papers from the control groups. All of the students in the experimental groups, however, answered all four questions in the assignment. Granted, they did not have to describe the nature of the project or refer to their reading, which may account for their following instructions better. But two students included relevant additional material. Student #10 wrote a detailed, lengthy account of the student teachers' adult sessions, with attention both to the content of the discussions and group dynamics. Another student, #9, who was conducting "Grouptalk" sessions with the tenth graders in her religious education class, described the teenage participants and what they learned from these sessions, then compared her reactions to leading this age group with leading second graders. Six of the ten final papers give specific, detailed answers to all four questions, evidence of the extent of the students' involvement in the project. A seventh student concentrated her detailed account on her own painful growth in learning group management – she learned how to cope with an extremely disruptive child. Another was handicapped in her efforts to be specific by the theft of her tapes. Only one other student wrote a final paper heavily loaded with generalities, which provided little basis for evaluating what she had learned.

a. Observations on What the Children Learned. – Training children to become better participants in a small group discussion implies sensitivity on the part of the leader to individual differences among children in a variety of cognitive and social skills. Therefore, the student teachers' assessments of what each child in her group learned from the Grouptalk sessions reflect to some extent her sensitivity as a leader. All but one of the student teachers first described each of the children in their group as an individual with a distinct pattern of needs, abilities, and skill in discussion; then traced changes in behavior which they noted during the course of the seven Grouptalk sessions. The typical lengthy descriptions of the children's discussion skills at these different stages are eloquent testimony to the student teachers' sensitivity to individual differences. In response to the question, "What did the children learn?"

the reports cover a host of observations on growth in social interactions and adherence to the rules of Grouptalk, as well as increased sophistication in the content of the child's contributions. With only two exceptions, the experimental groups' final papers convey keen interest in the progress of individual children and an ability to look sensitively for evidence of learning, i. e., in terms of the child's individual growth pattern. (The stolen tapes could account for one of the exceptions.)

I have condensed two rather long excerpts from the first section of two final papers because the exploratory study had, as one of its subsidiary aims, the substantiation of the pedagogical value of offering Grouptalk sessions to elementary school children, even at the second grade level. All of the student teachers cite some evidence indicating that each one of the children in their group learned something, there being considerable individual variation in the extent. The results are impressive and are difficult to condense. The first excerpt is part — by no means all — of student #5's description of Jim, an inarticulate child, and what he gained from seven Grouptalk sessions:

> Jim appeared to be quite slow. His speech is not very clear and he has trouble clarifying his point. This first Grouptalk gave me the impression that Jim would never catch on to the Grouptalk rules (I now stand corrected!). He contributed with definitions fairly well for the first time. He contributed very little in the discussion and when he did, the ideas were peculiar and he could barely be heard. In the second Grouptalk Jim rarely contributed, possibly only once or twice. His attention was focused on a piece of paper which he kept doodling with. When he did talk, he was very slow and stuttered, therefore the others continually interrupted him. He did enjoy the replay and coloring however. . . . . In the fifth Grouptalk we first went over the Grouptalk rules which made a strong impression on Jim. Even during the defining process, Jim brought to their attention that they were not stricking to the point as soon as the children started to get silly. He made an exceptionally good definition, thus showing maturity. He continually brought to their attention that they were not getting anywhere as the content drifted, and that nobody was listening to each other. He commented on the others' ideas and contributed some interesting new ones. Jim was the one who asked if we could stop the discussion when the thought dwindled and he felt they had discussed enough. Jim even helped with the summarizing content. One can see immeasurable growth in Jim already. In the sixth Grouptalk Paul's anger influences Jim too. He didn't contribute very much and most of it was again garbled. Then in the last Grouptalk Jim did show more evidence of growth. He even contributed towards the Grouptalk question they were formulating. He helped in defining the terms in a more mature way. He listened to others and contributed and built on their ideas. He was concerned as to how good the Grouptalk was, "Is this

> getting the best one?" Jim did show great individual development from a shy, inarticulate boy to one who readily contributed good ideas. He was able to grasp the rules by the fifth Grouptalk, but better than that he was able to put them in practice in the seventh Grouptalk. This small group experience was very beneficial for Jim in helping him communicate with others.

The other four children in this group profited from their participation each in a different way. Paul, a very competent contributor from the start who knew how to define terms and help in the summary, quickly became the group leader. "He grew mostly in listening to others and commenting on what they said." Arthur, on the other hand, had great difficulty in understanding how to define and usually wandered off the point when he spoke. By the seventh session his definitions had become excellent and, although at times he was still not relevant, "he listens to others carefully and even comments and asks questions about their comments." Catherine was very verbal from the start, but silly, giggly, and nearly always irrelevant. By the end of the sessions the quality of her participation had changed: "Her major gain is learning to share the conversation, asking others what they had done or said. She still tends to be irrelevant, but agrees with others when this is brought to her attention." The fifth member of the group, Jane, was painfally shy and quiet. She made only one contribution in the first session — that one irrelevant. Towards the end her definitions improved markedly and she became a valuable contributor to the discussion. "Grouptalk was a fantastic experience for Jane," is Student #5's conclusion. No wonder Jane said if she were a teacher her class would have Grouptalk!

Even hyperactive children, difficult problems in the classroom, gain from Grouptalk sessions led by a sensitive student teacher, as the following excerpts from Student #9's paper show:

> Amy's initial feelings about Grouptalk were frightening and negative. She was adverse to coming upstairs until she was told it was possible to leave if she so desired. Her presence at the first session ("What would you do if a fire started?") was mostly physical. She blatantly expressed that she didn't have any ideas, but managed in a shaky voice to say that one could call the Fire Department. Even though this contribution was in a near whisper, it proved that she was indeed listening, and the session was not totally as she anticipated: that is, something that would harm or threaten her personally.
>
> In her second session (the group's third — "What would you do if you were a teacher?") initially she was negative, but again reacted positively when given a personal choice in coming. Her uneasiness was still evident though; when I asked who would like to begin the discussion, Amy called out the members of the group: "Jane, Carrie, Bobbie. James can, but not me!" This obvious defense of hers

> did not last. Before long she was functioning as what I would call an exceptional Grouptalk participant. . . . . She listened, responded, was conscious of being relevant, and contributed ideas in defining terms: "a teacher is someone that teaches." 'Teacher' is a hard word for children to define. They mostly turned to the concrete ("Mrs. X is a teacher", etc.). Amy was the one who caught on, in an abstract manner, to the idea and utilized it. Furthermore, during the discussion she did not hesitate to place value judgments on other children's ideas: "I don't agree with Bobbie's idea (— of giving harder work than sixth grade, and if they don't do it, he will hit them with a ruler) because it's not nice." She did quite a lot of criticizing before she gave her own ideas, which when they came had both passive and agressive fantasy-like qualities. She would put poison in the snack, take kids to the zoo and throw them to the lions and tigers. Her academic suggestions were free and subsequently non-academic: "I would have the kids play a little, sing songs, have a story." She closed with the fervent desire to teach mental kids.

As the sessions progressed, Amy's negativism remained apparent, but was balanced by good participation and an unwillingness to leave at the end:

> There has obviously been a marked change in Amy's behavior during the Grouptalk sessions. . . . . If we assume that a change in behavior, especially in accordance with Grouptalk rules means a member has learned, then Amy has learned to participate and be relevant; she has learned to accept a Grouptalk activity of interaction with her peers at a mature level, which incidentally seems totally incongruent with her activities in class.

Her classroom behavior, described later in the report, presented a sharp contast, in keeping with most other observations of this disruptive child:

> She is extremely aggressive and literally shouts for attention. She has a lot of trouble relating to her classmates and doing what does not come easily to her. In Grouptalk she performed intelligently, waited her turn, and respected the ideas of the group. So we can say that Amy isn't aggressive when she doesn't have to be.

By the end of the year Amy had not learned to read much more than her name. She repeated second grade the following year and happened to be in a classroom with a Wheelock student teacher in Experimental Group II, whom Amy pressured to conduct Grouptalk sessions in which she could participate. Once organized, Amy immediately took over some of the leadership functions, explaining ahd helping to enforce Grouptalk rules.

b. Observations on Changes in the Group. — The typical detailed descriptions of the children's interactions testify to the student teachers' sophisticated awareness of group dynamics. The students illustrate with many examples too long to quote how the children interacted during the course of the Grouptalk sessions, usually achieving high group cohesion, but sometimes thwarted by an uncooperative member or the presence of an emotionally disturbed child, how the group took increasing responsibility for the enforcement of the Grouptalk rules, and how the leader's style and skill affected the children's ability to work well together.

One student traced the group's relative progress in learning the various aspects of Grouptalk:

Student #10: Roughly outlined, the chronological order in which this group was able to understand, assimilate and practice the rules of Grouptalk was as follows:

Respond: comment on what others have said
Discuss and decide the meaning of the terms
Listen in order to contribute and to stay relevant
Help in the summary.

Another included in her final report a series of quotations designed to illustrate the progress of her group, among other things, in defining terms. This is from the seventh session of Student #2's group:

Teacher: What does the 'people' mean (in this question)?
Mary: 'Everybody.'
Teacher: What do the rest of you think about this?
All: Agree.
Teacher: What does the word 'fight' mean?
Alice: It means they're not getting along with each other.
Teacher: They're not getting along with each other.
Sara: And they hit.
Robbie: They don't like each other.
Teacher: They're not getting along, they hit, and they don't like each other. Anything else you'd like to add?
Sara: They punch.
Teacher: And they punch. Do you think that's a good enough definition for the word 'fight'?
All: (Nod heads, agree) Yes.

Some groups showed marked progress over the course of the seven sessions:

Student #6: I found that group dynamics is of major importance to a successful Grouptalk. Once the children develop a sense of unity and responsibility to the group, they become better participants.

> At first the children were all fairly comfortable in Grouptalk. . . . . George was the main figure in the first couple of sessions with Kim supporting him. The children had trouble settling down in the second Grouptalk, therefore it took a while for them to become involved in the question. As more Grouptalks were held George became less of a major figure. The conversation became less of a one-man show. . . . . The fourth Grouptalk emphasized the importance of group unity and clearly illustrated that it was developing. George's teacher forced him to come to Grouptalk instead of allowing him to play outside with the rest of the class. He was given the choice of Grouptalk or the principal. He came to Grouptalk late, very upset, and went straight to the window to watch his class outside. It started to snow which was an added diversion. George's restlessness and unwillingness to participate in the discussion made the others restless — especially Terry. The two girls wanted everybody to participate because that was a rule of Grouptalk. All were aware of the total lack of group cohesion and were distressed by it. The Grouptalk broke up early and all the children went out to play. This experience showed in a negative way the unity the participants felt as a group. . . . . The last three Grouptalks showed the children beginning to enforce the rules of understanding, listening, contributing and responding independently of me. They were accepting the responsibility for running the Grouptalk, because of the unity established within the group. This solidarity had reached such a point that they formulated the last two questions alone. In both instances several subjects were suggested, parts of each subject were accepted and combined to form a final question. In Grouptalk #6 a vote was taken at the suggestion of the children to determine the question. This self-initiated activity indicated to me once again that these children had developed an identity as a group.

Other groups progressed less spectacularly even with excellent leadership because of a disruptive child:

Student #10: Emotionally disturbed, Len was a behavior problem with the group. In the beginning Grouptalks, he seemed to be unwilling to contribute voluntarily to the discussion, having little ability to give much concentration to the discussion, and was quite actively preoccupied with examining the tape recorder, and with making statements which, while only remotely related to the Grouptalk content, seemed to reflect a non-acceptance of the process at hand.

Yet, in spite of his constant provocations, by the seventh Grouptalk:

> . . . . . the group had attained a feeling of unity, so that even Len, who was a disturbance to the general Grouptalk process, was definitely accepted as a member of the group and was received as a source of mild entertainment.

> His anal-oriented remarks didn't seem to upset any of the children, although they showed constant, however casual, interest in what he had to say.

Still other groups, held back by the presence of a difficult child, were additionally handicapped by the student teacher's faltering leadership, sometimes recognized, sometimes not:

Student #7: They interplayed with each other pretty well from the second through the sixth session. After the sixth Grouptalk, the group divided into two factions: the boys and the girls. This separation was initiated by the boys more than by the girls as can be seen in Matthew's comment, "I don't agree with girls." The two boys seemed to depend on each other and considered the agreement of one to the other's statement a sign of friendship.

> Although there was a division in the group, there was an awareness on the part of all the children as to what they could expect from each other in both the discussion aspect of Grouptalk as well as the behavioral aspect. This awareness was limited but it was a definite mark of progress from the first to the last Grouptalk.
>
> Group strategy became clear to the children even to the point of boys' strategy vs. girls'. In the last Grouptalk, this fission was my fault. I let the children decide on two questions, and instead of trying to help them resolve the problem, I left them to resolve it themselves. They weren't ready for this and the dispute evolved into not what the question was, but whose question was going first. If Larry's went first, the girls decided they would not contribute. If Roberta's went first, then Larry would remain silent.

The children carried out their threats. When the girls' question was up for discussion, Larry acted as they had done and did not join in:

> He jumped up and down, played with the lights, and ignored my disciplining "demands".

Another student teacher (#3) noted a few subtle changes within the structure and dynamics of her group and felt it had lacked cohesion because of her teaching style:

> I believe that the major reason why the individuals never reached group proportions was that my role as a leader did not stimulate the unified goals and the satisfactions that the group might have shared.

In the beginning she felt she had been overly critical:

> My own disappointments and lack of enjoyment must have affected the children's image of Grouptalk. This fault

> decreases in time, for now I can listen to the tapes and roar with laughter and appreciation of the contributions. I feel that given more Grouptalks my defenses would have broken down, and the changes in group structure would have been more paramount and positive.

In all but two of the final papers there is also some reference to the manner in which leadership style and techniques affect the productivity and cohesiveness of a group and in particular how the student teacher had affected her group's response. The fact that there were often limits to the progress that the groups made enhanced, rather than detracted from the pedagogical value of the experience for the student teacher who led the group. Furthermore, since the students shared their experiences with theis classmates who had easier children to work with, considerable attention was focused on the variety of factors that affect group dynamics. Sensitive awareness of group dynamics is communicated in every final paper in the experimental groups.

c. Increased Understanding of Children. — Most of the student teachers were able to pinpoint some things which the Grouptalk experience had enabled them to learn about children, although some found it difficult to differentiate this knowledge from what they had learned from the classroom teacher or already knew, or might have learned from working closely with any small group of children. But leading the small group discussions, they agreed, did permit instructive observation:

Student #1: It was difficult for me to visualize, at the beginning of Grouptalk, a group of second graders having a discussion question to define and discuss; however, these children were quite ready to do this and do it with relative ease.

Student #5: First of all, Grouptalk emphasized the fact that each child is unique, each reacting differently to the same situation. It was also interesting to see all the different factors in their environment which had a strong influence on them. The weather often contributed toward their mood in Grouptalk, a succession of rainy days enhancing a wilder Grouptalk. I was also surprised to see how much influence individual children had on each other. This was especially noticeable by Paul's just slipping into the role of leader and the others really looking up to him. A perfect example of this was the sixth Grouptalk when Paul's attitude of anger and hate pervaded the whole group. The uniqueness of each child in their rate of maturing and understanding what Grouptalk is all about also varied greatly. It is not always the brighter children who catch on first, although Paul did. My understanding of children in a group has increased considerably. While comparing my group to others, it was interesting to see how their interests varied, although they were supposed to be composed of the same type children.

> The experience with Grouptalk supported my experience in the classroom: that children learn by experience. Through weekly exposure to the rules and the processes of Grouptalk, these children began to assimilate an understanding of Grouptalk. This was learned through their own experience, not entirely due to my listing and explaining rules to them. They learned through their experience and by hearing their mistakes during the playback and learning how to correct them.

A number of the reports comment on the different perspective, as compared with the classroom, which the Grouptalk situation gives to observations of children. Aspects of personality and determinants of behavior emerge which are difficult to see or do not occur in the large group or other types of small group:

Student #5: Also during Grouptalk the children would often come up with irrelevant statements thus revealing something that has been on their mind. In a large class the teacher cannot often pick up these statements that are so important to children, and also these statements are often helpful in discovering why a child is acting in such a way.

Student #7: Eleanor is a girl who was very self-conscious in the beginning. She would look at me before she even said anything, with a tinge of doubt in her expression. Later she relaxed, eagerly jumped for the microphone, and even injected humorous asides..... No longer did she look at me to check and see if I was watching. After I saw this growing period, I was surprised to see how shy she was when I entered the classroom. When I tried to talk with her she was very quiet and hesitant. The classroom is comprised of quite a few high powered and loud children and Eleanor is not a part of this. For Eleanor, Grouptalk was a relatively quiet time in which she could express herself and be heard without such strong competition.

Student #6: Grouptalk made me aware of the complexity of a personality, of an individual. Grouptalk emphasizes a fact of the child quite unlike those one sees in a classroom. In Grouptalk you see a child involved in informal conversations with no restrictions on the content of the discussion. In a classroom the ideas a child expresses are corrected, praised, or discouraged.

One phenomenon which impressed all of the students who had occasion to observe it, was the flowering towards the end of the series of sessions of the inarticulate, shy child, the one who made almost no contributions during the first few sessions. In Student #9's group, James was such a child, silent and enigmatic at first; towards the end he began to talk:

> The climax to James' experience in Grouptalk was during our last session ("What do you want to be when you grow

> up?"). James and Carrie had two tremendous discussions. one pertaining to being the President's wife and the other concerning the role of a scientist:
>
> Carrie: I would like to be a rich woman. I would like to be the President.
> James: Girls can't be Presidents.
> Carrie: Then I would be the President's wife.
> James: But the Presidents are always being killed.
> Carrie: No, they aren't.
> James: Oh, yeah? What about Bobby Kennedy?
> Carrie: Yeah. But you know what they do to people like that? They either put them in prison for the rest of their life or kill them.
> James: No. Kennedy died. So they buried him.
> Carrie: I know. But the man who killed him goes to court.
> James: Robert Kennedy died. And they put the man who killed him in the gas chamber. And that wouldn't make Kennedy rise from the dead, would it?
> Carrie: Well, no. But not all the Presidents are killed. Like Johnson and Humphrey.
> James: Yeah. But John Kennedy and Bobby were killed.
>
> During this discussion James was completely involved in the subject and became very emotional, almost to the point of violence in supporting his point. He really came completely out of his shell in this session and helped develop a remarkably fascinating discussion.

Almost all of the student teachers express an increased appreciation of children's needs for peer-oriented discussions, of the children's ability to improve in the quality of their communications with each other, and of their dependence more on adult encouragement of the process than on approval of the content:

Student #2: I feel that Grouptalk has taught me the importance of giving children of this age an opportunity, within a framework such as Grouptalk, to express themselves freely; the importance of the leader listening, so the child gets the feeling that you (as an adult) listen to what he says, and value it — that his ideas on a particular subject are significant.

Student #5: Also through Grouptalk I have learned how important it is for the children to build trust in their leader, so they may have a feeling of security. This produces an atmosphere in which the children can be and express themselves freely, which is extremely necessary in order to be well adjusted.

Students discovered that Grouptalk forced them to listen to the children and they heard things they had not expected to hear Student #9 writes:

> I was really amazed to find that even at this early age the children had an idea of the problems of the world. During different talks they mentioned poverty, war, bombs, and guns in relation to causing violence. Another fact that was revealed during Grouptalk #305 ("What would you do if you were a mother or a father?") was how great the need is for fathers to play a larger role in early childhood development. Most of their comments were in relation to their mother. Finally I said, "Well, what about if you were a father?" James very quietly responded, "My father is never home so I don't know what he does." I thought this was very sad and never realized that so few fathers do take a role other than disciplinarian in these early years. Perhaps this is a vast generalization, but after I saw it hold true in the Grouptalk, I talked to some of the children in my classroom and the story, in most cases, was still the same.

And Student #8 says:

> Almost all of the questions that I chose for my group concerned fantasy..... This helped bring about a better understanding of children's feelings, thoughts, fears and perceptions about life and the world as they see it.

Several of the reports refer explicitly to an increased awareness of characteristics typical of second grade children — their developing moral awareness and awakening social skills, their ability to discharge emotion verbally but their still high need for physical activity, the transition they are making from concern with fantasy to concern with fact; and their cognitive development and awakening facility to handle abstractions:

Student #2: I have read a great deal about children, connected with various courses I have taken and on my own. Grouptalk has given me the opportunity to see various things in practice. I cannot emphasize strongly enough the value I feel Grouptalk has had for my understanding of that particular age group. These children have reached an age where they have the capability to verbally discharge emotion — fear, anxiety, aggression. In Grouptalk #404, we find Bobbie discharging his anxiety, because of the wording of the question, "How should boys and girls be different?" He became aggressive and discharged this with hostility and sarcasm directed at Mary.

> I have become more attuned to sensitiveness of children of this age group on May 7 (Grouptalk #406). I have become more aware of little things like this which are actually very important but might otherwise have gone unnoticed. These things are essential for an understanding of children's moods and the way they react.

Student #6: The degree to which children are interested in their own egos was clarified for me by Grouptalk. They are still fairly self-centered in the second grade, yet are beginning to value the opinion of their peers. These eight year olds seem to be in a period of transition and at times are quite egotistical and at other times are very sophisticated and selfless. I see children of this age in another transition period from living in a real world; or more accurately having a realistic outlook. I seem to be saying again that I have a more complete concept of the child and his cognitive and emotional development as a result of my Grouptalk experiences.

Student #8: Through the defining process, I learned about how a young child determines the meaning of words. Verbs were particularly difficult to define. The children mainly used the verb in several sentences to demonstrate their understanding of it, rather than use another verb that meant the same thing. For the most part these children, at this age, will define a word in terms of what you do or how you do it or by using numerous adjectives. For example, 'witch' was defined by using words such as 'wears a black hat', 'black cat', 'dirty', 'spells'; 'clouds' was defined by 'floating in the sky', 'black cloud'.

This process also gave me insight into the perception of some things of that certain age and how some concepts cannot be understood. The main area that it showed up in is the concept of time..... One of my questions concerned Halloween. Before the Grouptalk the children had been discussing the length of time till Halloween. When it came to defining 'Halloween', however, they defined it in terms of what happens (you get candy) and not in terms of a certain date, of 'four days from now'. It is my thought that they do not fully understand the concept of time and extended periods of time. In the classroom.....as we discussed the calendar, many did not realize about the change in number of days in a month, the sequence of days and dates of each week. Therefore I realized that there are some things you could say in a classroom that would appear perfectly understandable to you as a teacher, but to the children might mean little.

Student #10: Frankly, I am amazed to discover, through my errors in leading Grouptalks, how little credit I had apparently albeit unknowingly, given children for thinking on their own. In counter-balance to the doubts that I had raised as a result of my classroom situation, I am now able to understand that the imposition of limits and rules onto a child's frame of reference does not necessarily inhibit his imagination or creativity: children need and want to know their limits, as this is the way chaos is prevented. I am able to see why the set of classroom rules was inhibiting, and why the set of rules within the Grouptalk structure is not.

> Related to this are the observations in how a normal child varies from the disturbed child in trying to handle the same "undesirable" fantasies, e.g., Edward's talking about mud puddles and chocolate ice-cream castles (vs. Len's drawing genitalia and using implied sentences) as a function of sublimation.
>
> At the same time, too, I have discovered that children's minds are not nearly as fragile as I suppose I must somehow have (again unconsciously) imagined they were; a teacher may sometimes need to examine her own motives for showering praise upon a child, since, at times, the profuse offering of teacher's reassurance is more of a reflection of his own self-doubt, than it is the pure intention of the constructive goal to encourage the faltering child. In fact, I see now that, unless checked out, the erring praise of the insecure teacher may be a source of confusion to a child who may not be able to understand why he is being praised with such intense lavishness.
>
> I believe that I have begun to understand the ways in which a child expresses relief either at having resolved an anxiety (e.g., Len after having experienced acceptance of his drawings of male and female genitalia, then drew a huge heart surrounded by smaller ones, over which was written, "I love Miss Stark"), or accomplished a difficult task (Terry drawing the colorful "I love Miss Markman").
>
> The experience of Grouptalk has pointed out how many hints there are in trying to understand a child's feelings: how much there is in a child's head that never gets verbalized, and yet which can be perceived through clues, e.g., watching how the child does or does not respond to various stimuli, how and when the child laughs, how he conducts his behavior, etc.

Grouptalk training enhanced the student teachers' understanding of many things about children; their individual differences, the development typical of second graders, their need for peer-directed communications, and their ability to take responsibility for their own learning in a structured situation.

d. Changes in Self-Image as a Teacher. — Most of the students report interesting, specific changes in their self-image. Two speak in generalities, only expressing their appreciation for Grouptalk training, but politely indicating that its main effect was to solidify an already firm self-image or one which was emerging under the tutelage of the cooperating teacher:

Student #4: Grouptalk has helped me as a potential teacher of young children. It became my assistant in developing the skills necessary for interpreting, predicting, and controlling the behavior of the members in any group, large or small, and, in essence, to become an effective classroom teacher.

Grouptalk has helped my "image" as a teacher in many ways. Before any person can effectively interpret and understand the behavior of others, he must understand and evaluate himself. Grouptalk has fostered me to develop a self-evaluative attitude. It has given me many categories to consider and a framework within which to lodge my interpretations. Grouptalk has helped me as a leader, and as a teacher, to gain insight into my own strengths and weaknesses.

Student #6: My self-image as a teacher has improved some as a result of Grouptalk. I believe I am more perceptive and understanding of children because of this experience. Just listening to children discuss a given question has shown me many things about the way children think. Therefore I am more sensitive when talking and working with children in a classroom. I am also a more creative teacher. Again, my outstanding teaching assignment and my superior cooperating teacher are largely responsible for my confidence in myself as a teacher.

The numerous changes in self-image which are mentioned by the other eight students indicate widespread agreement among them in their emerging educational philosophy. They are explicit in stating that their goal as teachers will be to provide orderly, non-restrictive guidance for children, and not be dispensers of correct information only. The importance of order in the classroom is stressed, but differentiated from traditional rigidity:

Student #1: The most important understanding that I gained from my participation in this project was the fact that group work and attempts to establish a respect for others in children is an essential aspect of schooling which can and should begin very early in the child's school career.

Student #3: The major change in the image I have of myself as a teacher is that effective learning does require order in the classroom..... In order to have an "unstructured" classroom there must be a certain amount of order in knowing what your goals are. One must have an idea of what is best for the children and be able to work within a desired framework. Teachers must be perfectly aware of the rules of this setup and be consistent in its application. Before Grouptalk I never realized how beneficial and important structure must be. It is true that one must have these "management" ideas but what must be important is that they are not restrictive to thought. Structure that is stifling to your goal will always be damaging.

Grouptalk has also reinforced the importance of objectivity in the classroom. A teacher should be a guide at times, not an informer. How important it is to accept thinking without eliciting my own. I might have had this idea before I was introduced to Grouptalk; however, I was never so practically conscious of its manifestations and its results. This philosophy has particularly helped me in the area of discipline. At this point I feel a conditioned response to ask children, "What do you think?" or "Why did you do this?" Even though I was aware of this before, it was never such a natural part of my vocabulary.

Student #7: I believe that my own classroom would be a "free" classroom; free within reasonable control. To have freedom and benefit from it there was to be a sense of clear and definite demands in which to function — some order. The child needs a guideline. I realized this when I let the group decide that they wanted two questions. They knew that they wanted two questions but didn't know how they were going to do it, and it was a complete disaster. I hadn't been definite in this situation; I let them go ahead with two questions and didn't even try to help them resolve this by combining the two into one question.

Student #8: I see my role as a teacher to be much more that of guidance than of initiating and directing every classroom activity. For the children to take over leadership and guidance roles is extremely important. My self-image as a teacher is not as much one to impart knowledge to someone else, but to learn with the children and take my cues for guidance from them. It is definitely important to give them necessary knowledge, but also to help them learn from their own experience.

Student #10: With the fifteen-year-olds, I found it much easier to restrict myself to comments on the process, avoiding those on content, than with the seven-year-olds. This is probably due to what was most likely an unconscious assumption that the 15's were more capable of finding their own answers than the 7's, which "logic" I have since seen to be incredibly erroneous!

Because of this experience, I am also better able to see my role of teacher as a "hands off" yet directive leader, who need not impose his opinions upon the child for fear that the child will learn "all wrong".

I see the teacher's role as one of guidance and support rather than one of authority.

Final papers also mention ideas about effective teaching techniques ones the student teachers will use in their classroom — encouraging children to learn through experience or example, providing opportunities to work in small groups, especially peer-directed discussion groups, encouraging self-initiated activity:

Student #3: Grouptalk has also made paramount the need for small group interplay during the day. It has further brought out the need for child-initiated discussion. Children have many things on their minds and would never have the opportunity to say them if the entire day was teacher-initiated. Here again I am not sure whether before Grouptalk I really believed that school should be teacher-initiated, but now I am sure it would be a disaster if the teacher never chose to extricate herself from the content of the discussion.

Student #2: Grouptalk has trained me not to correct children when you know they are wrong about something — but to help them to discover their error. In situations where the children of my group defined a word wrong — then when they were trying to continue with this discussion they found that it didn't work — I think this was a much more valuable learning experience for them to discover for themselves. I think this approach, in many cases, would be a better one for the teacher to take. I've seen in Grouptalk how well the children can work these things out — without a teacher correcting them. My image has changed about the kind of relation I want to establish with the children in my class — I've seen how well the children in Grouptalk respond to me, yet there is a relaxation and naturalness among us that creates a very conducive atmosphere for communication.

Student #3: Grouptalk, I think, is somewhat of an ideal situation. You are working with a small group of children and are teaching them through their experiencing being a member in a conversation. They, consequently, learn to carry on a good conversation, hopefully, and at the same time, learn how to handle the people who disrupt their talks. This is a tremendous idea, since you don't simply tell them how to talk, but simply guide them in the right direction and teach them without their being aware of it.

Teaching children how to communicate is essential in today's educational curriculum. If we can teach these youngsters how to talk and communicate now, then I think there could be less problems in the world, or at least the problems we have could be solved in a less violet way..... If these children progressed so much just in seven meetings, think of the progress that could be made if this type of activity could be carried out for several years. If this was done, then, perhaps, we wouldn't have the "communication" problems that are so prevalent all over the world.

I more fully realize the importance of acknowledging the validity of a child's response. It was self-initiated, by the child, and therefore is very important, valid and meaningful to him. I feel that it is of great importance to the child's self-image for him to be recognized as an individual with creative, valid feelings and ideas of his own. I now also feel it is important to discuss things in small groups when the adult is not the focal point. Contrary to what

I said in the second Adult Grouptalk ("How are the rules of Grouptalk learned?") rules do not have to be defined to be followed. One must teach by showing. A noisy classroom can be quieted down by being quiet yourself instead of shouting louder and giving a talk on why the room should be quiet.

Student #5: My thoughts on my self-image as a teacher are only now being compounded; therefore, they are not really changing but being constructed. My ideas on teaching varied from one extreme to the other: structured to unstructured. I could see myself in both situations. Grouptalk has greatly contributed towards my present understanding of my self-image as a teacher, which I am sure I will always be building and tearing down. However, through Grouptalk I have learned how important it is for the child's whole development to be able to talk to other peers and not only to the teacher. If this was practiced more often with children, possibly when they are the now generation, communication will be much easier.

Student #1: Grouptalk makes one more aware of how to deal with a group in gaining their opinions. I found that the techniques utilized in leading Grouptalk to be the technique that work most effectively in maintaining a truly democratic classroom. My involvement in this project solidified my belief that the teacher has to be continually aware of the needs of the group with which she is dealing and she must provide opportunities for problems and misconceptions to be acknowledged and solved.

Teaching style undergoes a change in some students, with an increased awareness of themselves and of their own effect on children:

Student #9: My experience with Grouptalk has increased my awareness not only of myself as a teacher, but of myself as a person.

Student #3: My mood is reflected beautifully in my voice. Tone quality is so important in my role as a teacher I must learn to correctly utilize it. How many times have my prejudices been heard but not spoken..... I imagine that a video would have revealed some camouflaged expressions, too.

Student #2: My role as a Grouptalk leader, and my function in that role has changed my image of myself as a teacher. Listening to tapes carefully I have come to realize how important the right response is in talking with children — not only the words you use — but the tone of voice. I have noticed several times that my enthusiasm in my voice was greater for something one child said, and less for another — only because one child happened to hit my thoughts more closely.

Student #1: Grouptalk has aided me in being more aware of the subtle ways in which teachers make their wishes known to children — a characteristic that extinguishes the children's desire to state their own opinions.

Student #10: I understand now that one's comment to a young child need *not* always be accompanied by a cheery, loving smile (some hangups we're discovering here, what?), but that it is definitely possible to relate warmly to children if you know what their needs are, and if your attitude is sincere and open — it doesn't matter *what* your face is doing. If you've got it on the inside, it'll come through onto the outside without your having to make one single adjustment. *If* you have it on the inside. And if you *don't* — it won't.

There is also an increased emphasis on the importance of listening to what children say and watching what they do in order to become a better teacher:

Student #9: I was also amazed to find to what extent you can discover a child's problems or just his thinking from the pictures they draw. I continued to use this type of investigation about a child in my classroom and hopefully was able to help them either solve or cope with some of the problems they seemed to be having.

Student #8: One of my main objectives in student teaching this semester was to learn to regard children as individuals. Grouptalk added to my understanding and self-confidence in accomplishing this task in my own classroom. I learned to look at each of the five children in my group as five separate people, each with his or her own particular characteristics which make this child unique.

Sensitivity to the children's thoughts and feelings is important, but so also is knowing how to be an effective leader. Consistency is repeatedly mentioned:

Student #9: I also learned the real need to be consistent in our discipline when dealing with children. After you have learned how to make a disciplinary policy in a small group it is much easier to be able to construct one in a larger group. I also saw how much more beneficial it was to give a child an alternative rather than just a flat "No!" I found this to be particularly true with Amy (the disruptive child). Another idea I found to be true was the fact that you cannot force a child to do something and expect him to do the job or task well.

Student #7: The person who learned the most from Grouptalk was me! Through working in a concentrated hour with a small number of children, I encountered problems closely face to face. My profit was mostly in the area of discipline with Larry..... At first his behavior angered me. It

> was frustrating to try to lead a Grouptalk and have someone off in the distance trying to disrupt it. When I asked him not to do something, he went right ahead and did it anyway. I found that saying flatly "Don't" was not a very positive approach to someone who needed positive interaction with adults.....

By the third session, this student teacher says she has "learned to be more understanding, relaxed, and positive in my disciplinary approaches." In the fourth session Larry caught her off guard. She comments:

> He taught me to think about his needs and not just my irritable responses to his misbehavior. He's helped me to understand how valuable discipline can be if it is positive and objective. I've also learned that children are very capable of cooperation and responsibility if they have a strong and consistent guideline. At times, I was not consistent in my demands.....

Most student teachers felt that their own self-confidence was increased by leading Grouptalk sessions. Student #5, an unusually reserved student teacher writes: "It has given me some self-confidence in leading a discussion with the class."

Student #7: Grouptalk was a good experience..... There's a smoother transition, I feel, in working from the responsibility of being in charge of a small group to the responsibility of a larger group.

Student #8: Grouptalk also made me review myself and my reactions and responses while in Grouptalk. I could hear my mistakes and realize what I should have said or how a situation should have been handled. I could hear myself pushing the group too long a period of time, or not guiding them with the proper techniques. By the end, however, I was learning to correct many of my mistakes.

Student #9: In working in Grouptalk one runs into much the same problems that you have in a classroom, but, of course, on a somewhat smaller scale. You go through the initial meeting of the children and must decide how you are going to run this "classroom". You must also build some kind of a relationship with the children which will enable you to communicate in the best way possible the ideas which you wish them to learn. You must also handle any problem children so that they know how you expect them to act, which also should be carried on to the other children, and let them know just what the "limits" are.

> There were many times that I left my Grouptalks with a feeling that everything had gone wrong and that very little had been accomplished. However, when I looked over the changes on the whole that had taken place in the group

> I saw that actually a tremendous amount was actually learned and that the children by the end of all the sessions could carry on a good conversation.

Student #1: As a result of this semester's work, I feel confident that I can establish a free and democratic classroom — a classroom where both the teacher and the pupils can interact peacefully and happily.

The increased self-confidence expressed by the student teachers mirrors my feeling that the exploratory study has increased my own capacity to teach Grouptalk effectively. My growth, like theirs, is due in large measure to what I heard when I listened to the student teachers talk.

e. Quantitative Summary. — Following the method described above for rating the control groups' final papers, I assigned ratings to the responses of each individual in the experimental groups to the four questions they had been asked to discuss. Table 14 presents these ratings, summarizing in a rough, quantitative way my judgment — based on the final papers only — of how much each student teacher learned from her Grouptalk training experience. How well did she describe changes in the individual children's mode of participation? Changes in the group? How much did she learn about children? To what extent did the training affect her self-image.

TABLE 14. — Ratings of Experimental Group's Responses to Four Questions Assigned on Final Report About Grouptalk Training Experience

Student	Assigned question							Total score
	1.Individual children		2.Group changes	3.Knowledge of children	4.Changes in self-image			
	Description	Learning			Goals	Means	Self-confidence	
#1	2	3	3	1	3	3	4	19
2	5	5	5	5	5	5	3	33
3	5	5	5	5	5	5	1	31
4	2	1	3	1	-	1	1	9
5	5	5	5	5	4	3	3	30
6	3	4	5	2	-	2	1	17
7	4	2	3	2	4	5	4	24
8	5	5	5	5	4	5	3	32
9	5	5	5	5	5	5	2	32
10	5	5	5	5	5	3	1	29
Av.rating	4.1	4.0	4.4	3.6	3.5	3.7	2.3	25.6

Table 14 shows that one student, #4, gained very little from the training. Two students, #1 and #6, made average gains. The rest of the student teachers received very high ratings, i.e., they learned a great deal in the brief Grouptalk training period. The group's average was 25.6.

f. Quantitative Comparison. — The impressive difference between the control and experimental groups in the evidence they present in their final papers about the educational impact of their individual study project is summarized in Table 15. The overall average rating of the experimental groups' answers to each of the four assigned questions (3.8) is much higher than that of the control groups (1.9). Furthermore, the difference between the two groups is large on all but one of the dimensions rated: sensitivity in their descriptions of individual children (0.3) — the dimension for which it was almost impossible to gauge learning and differentiate the skill shown from previously acquired ability. The difference between the two groups is largest (3.4) on the second dimension, which concerns observations of changes that took place within the group of children. The remainder of the differences, being larger than 0.7, are all sizeable. In other words, judging by what the student teachers wrote in their final reports, the educational impact of Grouptalk technique was considerably greater than that of the individual study projects pursued by the control groups.

TABLE 15. — Average Ratings of Experimental and Control Groups on Four Questions Assigned on Final Report

Dimensions rated on responses to questions	Average rating		Difference
	Experimental groups	Control groups	
1. Children	4.0	3.3	0.7
Description........	4.1	3.8	0.3
Learning...........	4.0	2.9	1.1
2. Group changes.......	4.4	1.0	3.4
3. Knowledge of children............	3.6	1.4	2.2
4. Changes in self-image...............	3.2	1.9	1.3
Goals.............	3.5	1.7	1.8
Means.............	3.7	2.5	1.2
Self-confidence...	2.3	1.4	0.9
Average educational impact	3.8	1.9	1.9

The findings having been examined in detail, let us turn to the conclusions to which they lead.

III. CONCLUSIONS

A. CONTRIBUTION OF GROUPTALK TO STUDENT TEACHER PREPARATION

Evaluating the addition of Grouptalk training to the Wheelock student teachers' educational curriculum program was the major goal of the exploratory study. Would a brief period spent in learning this new small group technique contribute measurably to their preparation for teaching at the primary grade level? According to my expectations, the contributions, if any, would be in the direction of their becoming better teachers and I defined 'better' according to my value system within the context of what Sorenson and Gross (1967) differentiate as instructional variables: beliefs about educational objectives, methods by which these can best be achieved and interpersonal style. A better teacher is also someone who thinks he is making progress in achieving his or her own instructional intentions, someone who feels there is growth towards his ego ideal. The findings lead to positive but complex conclusions.

1. Improved Leadership Skill First, it is clear that all of the students made some gains in learning to lead a specific type of small group discussion, i. e., Grouptalk. With practice eight of the ten student teachers — two made only small gains — became much more skillful in leading these sessions than they had been after reading the instruction manual. This means they were rated as more sensitive to individual needs and group dynamics, more adept at helping children keep up a discussion which followed Grouptalk rules and was peer-oriented. At the same time they refrained from interactions in matters of content and were able to encourage the children increasingly to take over leadership functions. They had become better teachers.

This increase in Grouptalk leadership skill added to the student teachers' sense of self-confidence in leading other types of small group, as well as classroom, discussions. The fact that it did not affect all of the supervisor's ratings of classroom performance at the end of the term on improvement in "ability to guide small groups" should be interpreted with great caution. Other evidence suggests that, in all probability, the newly acquired skill would become manifest at a later date.

But what about the two students whose Grouptalk leadership scores were average and in spite of practice remained almost static — improved, but not markedly? My conclusion, unsubstantiated in this report — because to do so would involve presenting case histories — is that these students were less influenced by their exposure to Grouptalk training than those whose skill increased considerably. I disregard the students' own positive estimates of the program's value to them. In other words, the exploratory study suggests that Grouptalk training is most beneficial for those student teachers who become proficient Grouptalk leaders. As teachers they will be adept at structuring group situations, sensitive to individual differences, flexible and supportive in their interactions with children.

The study also shows that a student can develop as a teacher without being able to learn how to lead Grouptalk sessions effectively: one girl with natural teaching aptitude patterned herself after the excellent model presented by her cooperating teacher and made real progress during the term. Grouptalk training does not "take" with every student exposed to it, just as all students do not profit greatly from experience in a classroom with an excellent teacher. It would have been unrealistic to expect that exposure to Grouptalk training would have the same degree of beneficial effect for everyone in the group. It did not in this exploratory study. That it succeeded in reaching eight out of the ten students, however, is a most encouraging result.

2. Effect on Teaching Goals Other kinds of evidence that Grouptalk training was an important addition to the preparation of the students in the experimental groups comes from analysis of the adult Grouptalk sessions, the Student Teacher Paragraph Completion Test, and the final papers. All three of these sources of data, particularly the final papers, indicate variable degrees of growth in a number of areas.

The training had a definite influence on the students' teaching goals. The students became even more strongly committed than they already were to the idea of helping children learn by guiding them to discoveries rather than by teaching them facts. Some said this was because they felt at ease in this role of guide and had been able to teach children more effectively this way. The students became quite sophisticated in relating their classroom activities to their educational philosophy.

3. Influence on Choice of Teaching Technique Changes occurred in the students' opinions about useful techniques for achieving their educational objectives. They became convinced that it is important to include peer-oriented small group discussions in classroom activities. The students also gained an increased appreciation of the extent of the real structuring that the teacher must supply for children to be able to learn through discovery.

4. Acceleration of Teacher Growth Achievement of their educational goals also necessitates teacher growth, which Grouptalk training accelerates. The student teachers became better equipped to achieve their goals in a number of ways. We have already noted their increased skill in leading Grouptalk sessions. Sensitivity to the needs of individual children and their patterns of development also increased. The students became more attuned to evidence of children's learning outside traditional subject matter, i.e., improvement in oral expression, ease of social interactions, cognitive skills such as defining terms, remaining relevant to topics and summarizing. Their awareness of group dynamics increased as they observed how interrelationships between children affect the group's cohesion and how this in turn affects the group's ability to learn. They began to see more clearly the effect on the group of the adult leader's actions, verbal and nonverbal, particularly with respect to setting up controls, structuring the sessions and communicating support. The students' understanding of children in general became more concrete and specific in areas such as the range of individual differences, uniqueness of personality patterns, stages of development, ways children learn through example and discovery, and the needs

and cognitive skills typical of second graders. In short, Grouptalk training resulted in the students coming much closer to achieving their goals.

5. Influence on Teaching Style Teaching style, in some respects also related to achieving one's educational goals, was profoundly affected in a few cases by the Grouptalk experience. Some students became much more aware of how they communicated their expectations to the children. In sessions towards the end they tried to modify some of their own unrealistic expectations and make certain the children understood the others; they tried to be more consistent in the way they structured situations. They probed more deeply into the implications of what it means to trust children, to accept them and their ideas with respect.

6. Gains in Self-Confidence The conviction that Grouptalk training increased their self-confidence and helped them come a little closer to their image of a good teacher was expressed by most of the students. They all very much enjoyed leading Grouptalk sessions, which they felt provided opportunities for their own continuous growth because they could learn from interactions with the children. The students' unanimous recommendation that Grouptalk training be incorporated as a regular part of the teacher training curriculum at Wheelock was therefore not surprising. Their self-confidence stemed from increased competence.

7. Relative Usefulness of Data to Compare Experimental and Control Groups The design of the exploratory study included a control group to help evaluate the changes which were noted in the experimental group during the ten weeks' period of student teaching and help decide which of the changes should be attributed to Grouptalk training. The things the students in both groups learned during their teaching apprenticeship — techniques to achieve increasingly articulated teaching goals, aspects of classroom management, more about children and about themselves — obviously were a complex function of their teaching potential at the beginning of the term, their relationship with the supervisor and with the particular cooperating teacher they had and of her teaching style. In addition, however, there were effects attributable to their individual study project which, in the case of the experimental groups, was Grouptalk training. A variety of measuring tools was selected to evaluate it.

We expected to find differences in the comparative data because the situational difference was clear cut. In the control groups' teacher training experience, there was no uniform elaborate structuring, either in the classroom or in the curricular seminars, which ensured close attention to group leadership skills, such as, how to manage classrooms which stress individual growth as opposed to traditional classrooms where leadership skills are minimally required; nothing which taught leadership skills in a formal training situation with feedback which increased their self-confidence as adults in authority; nothing which would force them to become highly conscious of their goals as teachers and of the relationship between their goals and teaching techniques. The cooperating teacher might stress these various things, but there certainly was no assurance that she would. How, then, did the two groups compare? Which of the comparative data led to firm conclusions?

a. Rating Data Inconclusive. — The effect of Grouptalk training, measured by means of changes in supervisor and teacher ratings before and after the students' apprenticeship, is definitely negligible. But careful analysis of the data from both groups suggests that great caution is necessary before drawing the conclusion from these results that Grouptalk training made no measurable difference. After all, ratings of "teaching potential" were lower after ten weeks of teaching in some instances in both experimental and control groups! Furthermore, evidence from the final papers, not included in the supervisor's ratings, would have led to revised assessments of several students in the experimental groups and of one in the control group. The latter's final report on her ambitious study project led the supervisor to conclude that she would become a far better teacher than was anticipated on the basis of classroom observations. Writing the final paper was, for most of the students in the experimental groups, an important part of their learning experience, leading to growth which therefore could not be taken into account in the "objective" measurements of progress.

The teacher and supervisor ratings warrant drawing one conclusion: Grouptalk training cannot make a silk purse out of a sow's ear. Grouptalk training did not have the immediate effect of helping average or moderately good student teachers achieve the superior level of competence, either in their student teaching performance or in assessments of their teaching potential, which was attributed to two students in the control groups at the beginning and again at the end of their apprenticeship by both Dr. Bent and their cooperating teachers. There is no evidence to suggest that either of these students was over-rated or that any of the students in the experimental groups could in the near future match them in overall teaching ability or potential.

b. Q-sort Data Ambiguous. — The Q-sort data, collected to evaluate the effects of the Wheelock program and, in particular, of Grouptalk training in reducing the stresses and strains of teacher training, are ambiguous. The small size of the sample and its relative homogeneity make them difficult to interpret. Furthermore, internal evidence suggests that the test may not yield valid measures of openness for our population, so different from the one on which it was standardized. The data suggest that there is no relationship between changes in openness and the student teaching experience; furthermore, as previous investigators had found (Bills, et al.) the student changes in openness also seem to be unrelated to the openness of the cooperating teacher (cf. , Appendix VII).

Impressionistic observations in this area of emotional maturity are perhaps worth mentioning. The addition of Grouptalk training definitely increased the difficulty of the student teaching situation by complicating the student-teacher relationship. There is no reason to believe that it affected the current anxiety level of student teachers in a positive way, even though it definitely increased their self-confidence in the teaching role. It was much too small a segment of the total student teaching experience to be an influential factor in reducing anxiety associated with student teaching. The anxiety level during the period of student teaching was very high for several of the students in spite of frequent conferences and a close and supportive relationship with their supervisor.

In general, anxiety tended to diminish during the apprenticeship when the student teacher could accept the cooperating teacher's basic educational goals and teaching style as a model she wanted to emulate. Yet for some whose teaching placement was excellent, there were serious sources of anxiety quite unrelated to their particular teaching situation. On the other hand, a few students were able to function well and learn from teachers whom they could not accept as models of good teaching.

c. Important Contribution of Final Papers. — Comparative data from the final papers and from the Student Teacher Paragraph Completion Test (discussed in another context below) are rich and mutually consistent. Together they make it possible to pinpoint what Grouptalk training did add to the preparation of the students in the experimental groups.

From the final paper it is clear that the students in the control groups, with the exception of two or three, did not use their individual study project effectively to promote growth in their role as teacher. They did not fully utilize the "episode teaching," or self-contained event appropriate to the age level and general interest of the children, so highly recommended by Lundy and Hale (1965). The rationale of this type of teacher training is to center all of the student's effort and attention on the teaching act, to make the relationship between techniques and goals more explicit and to increase self-confidence in one's ability to achieve the educational aims.

The final paper, with its four assigned questions, did lead the students in the control groups to focus closely on a few children and thereby helped increase their sensitivity to individual differences. But, with one notable exception — the student who studied social learning — work with children in their individual study projects appears to have contributed relatively little to the students' learning during the apprenticeship period. What they learned seemed to stem largely from reading they had done in the field. The complex relationship between the students' predispositions, the cooperating teachers' style, and the supervisor's contribution was far more important in determining what the student gained from her classroom experiences in that ten weeks.

As a group, these student teachers changed very little in the dimensions selected for analysis of both the incomplete paragraphs and final papers. They did not become more knowledgeable about group dynamics or children's development. Their skill in small group leadership did not improve markedly. They did not become more aware than they had previously been of the value of peer-oriented discussions or learn techniques to facilitate them. They reported little increased general knowledge about children. Few felt that the project had increased their self-confidence as teachers. Finally, and perhaps most important, as a group their work with the children in the individual study projects did not help make more explicit the relationship between their educational goals and specific techniques to achieve these goals. The first part of the adage, "Good teachers are born. . . . . ," is confirmed by the comparative data of the exploratory study because the outstanding student teacher was in the control group. But the remainder of the adage is contradicted, for Grouptalk training did make a measurable contribution to the experimental groups' preparation.

d. Validity of the Findings. — An independent source of evidence — qualitative remarks in the cooperating teachers' final assessments for the Newton Public Schools — suggests that the qualitative comparative data have general validity. Teachers of the control students usually described the student's strength, which became apparent during her apprenticeship, in terms of good rapport with children, sensitivity to individual needs, ability to encourage individual growth, use of materials to enrich learning, etc. Weaknesses were frequently noted in the area of group control; sometimes in lack of consistency or skill in leading discussions. Comments about six of the control students include:

> Her weakness is in the area of control of group behavior. Did well in controlling small groups, although she leaned towards projects for the whole class. Weakness: inappropriateness and ineffective discipline, which disappears only with years of practice.
>
> Has begun to grow in her sensitivity to the needs of the group as a whole. Large group control needs refining.
>
> Her greatest problem now is to adjust here natural sensitivity to children's needs to be able to assert authority over them in a large group. She has grown a great deal in this respect but needs more time to feel comfortable as an authority figure.
>
> Needs to direct group discussions and plans better. Also needs better group control. Needs to learn how to follow through with her decisions, to be more consistent.
>
> Needs to develop better control of group behavior and channel many excited individual responses into a climate whereby children are able to learn from each other as members of a group.
>
> Transition techniques between group activities need strengthening. Also, experience with more class discussion and spontaneous activities that arise out of children's immedite needs.

One teacher made no comment about her apprentice teacher in these respects. Two other teachers were highly favorable:

> Excellent relationship with large group. Good control.
>
> Her control is better than most student teachers. She would function well in a traditional classroom. She needs to be encouraged to be flexible and allow more freedom.

The students in the experimental groups, on the other hand, were described by their cooperating teachers in different terms. The teachers often commented positively on their ability to work with small groups, while weaknesses are described quite differently for different individuals, none being characteristic of the experimental group as a whole.

In other words, the qualitative remarks of the master teachers suggest that Grouptalk training made a real difference. Because of the high frequency of classroom management problems among first year teachers, these group differences could be very significant.

8. General Conclusion In view of the short period of Grouptalk training which the experimental groups had, the numerous discontinuities in this training (discussed in the next section), the global nature of the effects anticipated from training, and the difficulty of assembling sensitive measuring instruments, the fact that any differences were found between the experimental and control groups is in itself noteworthy. The effects of Grouptalk training conducted under more favorable circumstances might have been even greater.

B. APPROPRIATENESS OF TRAINING PROCEDURE USED

1. During Students' Apprenticeship In designing the study, it had seemed appropriate for several reasons to time the Grouptalk training to coincide with the Wheelock students' apprenticeship in the junior or senior year. The students would be working in the school and would not need to make a perhaps difficult break in their schedules to get there; they already had some experience in the previous year observing and working with children; the procedures, followed with several student teachers while they were apprentices at the Underwood School, had worked well. Experience gained during this exploratory study, however, indicates there are a large number of disadvantages to the systematic introduction of Grouptalk training under the present schedule for student teaching at Wheelock College:

a. Insufficient Time. — The cooperating teachers at the Underwood School felt that the time allocated to work together — one full day and three half days a week for ten weeks — was already too short to accomplish their goals. Grouptalk training, which involves prearranging children's sessions, conferences, and adult sessions, seriously competed for time with the cooperating teacher, who already felt shortchanged by the Wheelock College schedule.

The student teachers did not feel, as the teachers did, that Grouptalk reduced their involvement in the classroom. They would have preferred more regular, longer conferences with me. With five student teachers involved in the Grouptalk training effort, conference time frequently had to be cut short.

Training time for the experimental groups was definitely inadequate from my point of view also. The two Wheelock students whom I taught under non-experimental circumstances conducted about 20 sessions with the children from their classrooms, roughly four with each of five groups. This gave them valuable experience in dealing with different types of small groups and additional insight into group management, which the experimental group did not have time for.

b. Space Problems. — In previous years, with only one or two student teachers conducting Grouptalk sessions, there had already been some difficulty in finding suitable space at the Underwood School, i. e., a room acoustically isolated from other children in which noise does not reverberate. The problem became acute when five student teachers required space in an overcrowded school, built for 350 children, housing over 550, which was already making full use of corridors for teaching purposes. A number of the experimental students' Grouptalk sessions began with a long trek in search of a quiet spot. This added to the difficulty of giving cohesion to the lession. My conferences with the student teachers were held under such unfavorable acoustical circumstances that often it was impossible to hear the playback of their sessions and give them constructive criticism. Space problems might be quite minor in other, more modern schools. But adequate space, so essential in planning for effective Grouptalk training, is usually difficult to find in an elementary school.

c. Placement Difficulties. — Several students working in a single school make Grouptalk instruction more convenient. But we found it extremely difficult to secure several cooperating teachers in one school. The present widespread system of relying on the cooperation of teachers who receive neither a reduction in teaching load nor increased compensation to help train student teachers makes it an enormous chore for the college supervisor to place her students, especially if the teachers are asked to allow simultaneous participation in Grouptalk training.

d. Problems of Continuity. — Children should be able to meet fairly regularly, roughly once a week, in order to build up a sense of group cohesion, so necessary for effective learning in Grouptalk sessions. The difficulty of doing this is increased when the college schedule differs markedly from that of the school where the student is apprenticed. Our first experimental group, the juniors, was plagued by unusually long intervals between sessions. Heavy snows frequently cancelled school in February and March. The children's vacation did not coincide with that of the College, which meant three weeks between sessions. The juniors' involvement in the project was further adversely affected by the month long disturbances at Wheelock College. This was particularly hard on two students who, because of their positions in student government, had to devote long hours to student-faculty meetings. Their student teaching and Grouptalk responsibilities became a heavy burden, creating a special and difficult problem for our project.

2. Training Technique The method used to teach Grouptalk technique worked fairly well on the whole. The first two adult Grouptalks enabled the students to have as their first exposure to Grouptalk, an experience somewhat similar to the children's they would lead. The question for the second adult session was good — the first question and one or two others could have been better. The juniors found the manual and the timing of its presentation helpful, but said that they should have been asked to reread it after leading four or five sessions. Other favorable comments, made in the bull session with Dr. Bent and myself, which was held after they had finished their final papers, related to: watching me lead their children's first session, transcribing their own group's session for distribution to each other, and having transcriptions of the adult Grouptalk sessions available.

The students wished that tapes of other students' far-from-perfect sessions had been available before they led their first ones. Video tapes for both adult and children's sessions would have been even better, because much of the group interaction and the leader's is lost in tape recordings. Most students thought that the conferences following the Grouptalk sessions had been too short. Video tapes, if introduced, would make the conferences more flexible in timing and more effective, and eliminate the arduous task of transcribing the adult sessions – feasible only for a research project. The effort put into writing the final paper was considered very worthwhile. An interesting discussion developed, because of difficulties in handling two problem children, over the question of whether the students should have been given an opportunity to observe the children in the classroom or talk with teachers about them before leading them in Grouptalk. The system we followed eventually, the students agreed was the best. It was the one least likely to prejudice their opinions and most comparable to the teacher's task at the beginning of the year: structuring her classroom according to her own goals and teaching style.

Ideally the training technique for Grouptalk should allow the student to lead groups for more than six sessions if the children's interest is high. Students should also have an opportunity to lead several different groups, the same children in different group arrangements and groups at various grade levels. If this ambitious program could be carried out, Grouptalk training would become at least a semester course.

C. VALUE OF GROUPTALK FOR SECOND GRADERS

Part of the reason for asking the students to answer in their final papers the question, What did the individual children learn from their participation in Grouptalk? was my interest in trying to substantiate previous estimates of the pedagogical value of this type of small group discussion at the second grade level. The lengthy quotations from the final papers should convey the variety of gains to be expected from Grouptalk training even with inexperienced student teachers as leaders. The variability in what is learned is great. It depends on the child, the group composition and the leader's skill. Some learning which is not apparent during the sessions may become evident in other contexts or in subsequent Grouptalks. Relatively short exposure to the technique seems to go a long way for some children.

The student teachers' groups varied considerably in the number of sessions which held the children's interest at a high level. Some were ready to stop after the fifth session. Others were reluctant to have them stop after seven. Other children were eager to continue with Grouptalk if the composition of the group could be changed – to include their best friends or only children of the same sex.

In order to assess changes in the quality of the children's participation under comparable conditions, since I had led their first session, at the end of the seniors' series of sessions, I led an additional Grouptalk. Gains were evident in all but one child, a severely disturbed girl whose emotional problems so distorted her thinking and relations with others that her participation could not really be described as improved. Some of the shy children, however, were almost difficult to recognize as they had become such good participants. Thus the exploratory study substantiates, insofar as it proposed to do so, the belief that Grouptalk can help young children develop important oral communication skills.

D. USEFULNESS OF PROJECTIVE TESTS IN TEACHER EVALUATION

The Student Teacher Paragraph Completion Test, devised especially for this research project but with insufficient time for pre-testing, was useful for differentiating between the experimental and control groups. Ratings of responses to three of the five incomplete paragraphs, a total of five dimensions, showed some anticipated changes in attitudes, perceptions and values in the experimental groups and none in the opposite direction, whereas the less frequent changes in the control groups were sometimes negative. The test data were also analyzed in another manner, a more clinical type of pattern analysis. The test appears to elicit responses that have a high degree of consistency, or stability, over this short period of time, and yet be sensitive enough to detect changes in basic variables relevant to teaching. The indicated changes, furthermore, correlated with impressions which Dr. Bent and I had of the student teachers' growth during their apprenticeship.

These results should not be taken to indicate that the Student Teacher Paragraph Completion Test, in its present form, is a useful instrument for teacher appraisal, nor that it could become, even when considerably improved, a good single predictor of teaching effectiveness. The work which Bjerstedt (1967) and others have done indicates the necessity of avoiding static conceptualizations and oversimplifications of design. In his interaction-oriented approach, Bjerstedt suggests using projective tests to collect some of the data, on the dimension of social awareness, for example. But he justifiably advocates the use of several other data-collection methods. The results of my exploratory research project should be taken as a confirmation of the soundness of his advice.

IV. RECOMMENDATIONS

Three recommendations for action emerge from the research:

1. Explore Further Ways to Introduce Grouptalk Training in the Teacher Education Curriculum The exploratory study indicates there is great value in Grouptalk training for teacher preparation, but also that it is inadvisable to introduce it during a student teacher's apprenticeship. A better way of incorporating it into teacher training, one that permits greater continuity and depth of training, is needed. The successful technique developed to teach Grouptalk to students presupposes the retention of small groups in adult sessions, hence a high trainer-to-trainee ratio. For this reason further exploration of teaching aids, such as video tapes, should be combined with training of assistants, such as graduate students, who will help supervise the student teacher's acquisition of Grouptalk technique. Microteaching techniques should be explored.

2. Explore Ways to Introduce Grouptalk Technique in Elementary Schools Since Grouptalk sessions are of value for children at the second grade level and older, and because it is inadvisable to use student teachers as leaders during their apprenticeship, other possibilities for securing leaders should be considered. Students trained before their period of student teaching could conduct Grouptalk sessions if they were placed in second grade classrooms or were working with older children. Parents might also become Grouptalk leaders; or teenagers.

A problem related to the preparation of student teachers but not considered in this study is giving support in a school system to beginning teachers. It might be possible to facilitate communication among the staff on matters of mutual professional concern and at the same time offer helpful guidance to first year teachers by providing in-service workshops in Grouptalk technique. The impact of Grouptalk technique on eduction would be broad if these courses of action could be implemented.

3. Develop a Discriminating Projective Test, Based on the Student Teacher Paragraph Completion Test to Help Predict Teacher Effectiveness The importance of being able to predict teacher effectiveness and the difficulty of doing so suggests the value of following further the development of any test which gives some indication of being useful. The final selection of incomplete paragraphs to elicit responses should follow a period of pre-testing, which confirmed the relevance of the responses to key variables. Ease in scoring the responses along useful dimensions would also be an important consideration in developing the test.

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APPENDIX I

STUDENT TEACHING PLACEMENT AND AUTOBIOGRAPHY

Wheelock College

Student:__________ Student Teaching Assignment:__________
City:__________ School__________ Level__________
Principal__________ Cooperating Teacher__________
Assignment Dates__________ Supervisor__________

Home Address__________ Tel.__________ College Address__________
Date of Birth__________ Siblings__________
Place in Family (Oldest, etc.)__________

I. Education: Secondary Schools Attended
Name of School__________ Location__________
Public or Private__________ Date of Graduation__________
Major interests or activities__________

II. Employment Record
Work Experiences (type, date and length of employment)__________

III. Professional Interests
For how long have you been interested in becoming a teacher?__________
What other vocations have you considered?__________
What experiences have you had in schools other than your own attendance in them?__________

IV. Contacts with Children. Describe the types of experiences you have had with children. Clearly indicate the ages of children, the kind of responsibility and the duration of your experiences. This may be an elaboration on work experience.

V. Personal interests and talents. Provide a description which tells something about you as a person – special interests, leisure activities, travels, hobbies, books or magazines you enjoy.

VI. Working Relationships. Describe what you think you may be like as a co-worker, e.g., how do you usually react when you first begin to work with other adults? What seems to free you to work with others most effectively? How do you usually deal with problems that occur in your relationships? Or for yourself? How do you respond to criticisms or suggestions?

VII. Professional Courses. List by name any professional courses you have taken up to this time.__________
List by name courses you are currently taking__________

CONCLUSION BASED ON ANALYSIS OF RESPONSES

The experimental and control groups are sufficiently alike with respect to important demographic variables for them to be considered as equivalent groups. There are no marked differences in age, family and educational background, experience with children and initial committment to teaching as a career. The small differences which occur all point in the direction of slightly more maturity in the control group: their average age is a little higher and their experience with children a bit more extensive.

APPENDIX II

QUESTIONS USED IN ADULT GROUPTALKS

Group I (juniors):

1. Does effective learning require order in the classroom?
2. How are the rules of Grouptalk learned?
3. What are the implications for classroom management of the method used to introduce you to Grouptalk?
4. Why was the structuring of Grouptalk #301 different from that used with other groups' first sessions?
5. What did you learn about Grouptalk leadership techniques from the children's second sessions?
6. What has Grouptalk taught you about children?
7. If the majority agrees that the change was necessary, do you think that the small minority whose violent action brought about the change should be punished?

Group II (seniors):

1. Does effective learning require order in the classroom?
2. How are the rules of Grouptalk learned?
3. Was listening to another student teacher's first session helpful?
4. Are citizen-initiated protest days justifiable in an ideal representative democracy?
5. How is the quality of a Grouptalk session related to the leader's technique?
6. If you were a man, would you want to be a primary grade teacher?
7. What have we learned from Grouptalk? (Question chosen by the group.)

APPENDIX III

COLLEGE STUDENT PROBLEMS Q-SORT (FREEZE)

This test was devised by Freeze (1963) to measure openness. It consists of 84 items such as:

1. Finding time to do the things I would like to do in light of the amount of work assigned to me
2. College professors who are inefficient and who do not care whether students learn or not

The student is asked to place each item in one of 11 categories, depending upon how pressing they consider it to be. The total number of items to be placed in each category is determined by the Q-sort distribution. In the scoring of the test, 20 items are disregarded, 34 items are scored positively when placed in categories 1-5 and negatively in categories 7-11, the remaining 34 items are scored positively when placed in categories 7-11 and negatively in categories 1-5. Thus the range of openness scores is from -68 to +68.

Freeze's test is reprinted in entirety, along with instructions for administration, in Bills, et al. (1964). I used the first part only of Item #16,

> "Not being asked for a date (girl)" and omitted the second part, "Being turned down when asking for a date (boy)"

After many attempts to obtain the scoring key used by Freeze, all unsuccessful, I reconstructed the scoring on the basis of independent ratings of three people. Agreement on the 84 items was almost unanimous. Where differences occurred I took the ratings assigned by two of the three raters. This scoring key is probably a close match to the one used by Freeze.

APPENDIX IV

STUDENT PARAGRAPH COMPLETION TEST (WHIPPLE)

A. INSTRUCTIONS

We would like you to use five unfinished paragraphs as a way of communicating your feelings and beliefs. Put yourself in the situation as best you can. Then finish each paragraph by stating how you think you would feel in that situation, the thoughts you might have and the actions you might take. There are no "right" answers. So don't try to write what you think you should say. Ask for more paper if you need it. Thank you. Babette S. Whipple

B. PARAGRAPHS TO BE COMPLETED

I. A teacher with many years of experience in the classroom told her young apprentice to be very careful from the beginning not to let the second graders get the upper hand, "They cannot be trusted. Most of them enjoy scheming to embarrass or destroy you." The student teacher considered this advice. . . . .

II. A teacher who believes that feelings of adequacy lead to complacency and low motivation will try to motivate children to learn more by pointing out things they have done wrong or could do better and at times presenting challenges that may be too difficult to master. A second grade child with such a teacher. . . . .

III. Some years ago, I visited a well-known demonstration school. Each classroom had a carefully picked teacher. Visiting the rooms in this school with the principal one day, I was much impressed with the beautiful work that many of the students had produced. Classroom after classroom was charmingly and artistically decorated with the children's productions: artwork, science demonstrations, biological specimens, collections of all sorts and descriptions. After five or six such rooms we walked into another so different from the others as to be almost a shock. This room was nearly bare of the materials we had seen in the others. Instead, in this class the teacher sat in the middle of a group of children holding a quiet discussion. Leaving the room with the principal, I remarked on this fact. . . . .

IV. We were having a typical bull session in the dormitory. Janice said, "What I want out of teaching is just something to do until my tall, dark and handsome comes along." I found it difficult to give a brief statement of my reasons for going into teaching. I have so many, most of them positive but some negative, and some I feel more sure about than others. Being a teacher. . . . .

V. The twenty children in the unstructured second grade classroom were fairly quiet until one boy snatched some blocks away from another child. Three or four others became involved in the loud dispute. One came to tell the teacher what had happened. The teacher. . . . .

APPENDIX V

RATING OF STUDENT TEACHER FOR GROUPTALK TEACHER TRAINING PROJECT

Teacher/supervisor: Student Teacher: Date:

Please rate student by circling appropriate number on the adjacent five point scale (1 = low rating; 5 = high rating)

I. Personality traits:[*]

- affectionate
- ambitious
- careless
- cheerful
- clear-thinking
- curious
- demanding
- determined
- dominant
- dreamy
- easy going
- individualistic
- irresponsible
- logical
- natural
- persevering
- persistent
- responsible
- rigid
- serious
- thoughtful
- unconventional
- understanding

II. Global characteristics:

- strong, resourceful individual
- clear and explicit about goals
- resolute in pursuing goals
- domineering in class
- insightful with students
- liked by students
- indifferent to practical matters
- open to new experience
- at ease with children (rapport)
- ability to guide small groups
- appropriateness of demands on and expectations of children
- helps children take responsibility for own learning
- consistency in management of children

III. Overall rating:

1. Her performance as student teacher is likely to be[**] was[***]
   my confidence in this rating is
2. Her ultimate performance as teacher is likely to be
   my confidence in this rating is

FINDINGS

Dr. Bent's ratings on both personality traits and global characteristics tend to be a little less favorable than those of the cooperating teachers. But this difference diminishes on overall ratings made after student teaching and the disagreements follow no particular pattern.

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[*] List of personality traits based on a study by Gough & Durflinger (1968). Traits listed in columns on left side of two pages; rating scales adjacent.

[**] Form used for first rating

[***] Form used for second rating

Comparisons between the overall ratings, furthermore, indicate greater agreement on the final assessments than on the initial ones. Ratings for predictions about performance in student teaching are identical in only six of the 20 ratings, but agreement is perfect on 10 judgments regarding the students' actual performance. Initial estimates of teaching potential are identical for eight students, but estimates at the end of the term are identical for 14. Apparently, although the frames of reference for assessments of teaching potential after considerable observation of student teaching coincide closely, supervisor and teacher have slightly different bases for judging student teaching performance, which is not surprising.

Agreement between the supervisor and the experienced teachers was high on the final assessment of teaching potential. But all three of the inexperienced teachers gave their students (in the experimental group) higher ratings — again a not unexpected finding. Before assuming greater validity for the supervisor's judgments, however, we should note an unusual fact, i. e. , Dr. Bent indicated a decrease in certainty regarding her second assessments of six students in the experimental group, whereas her confidence increased by +1.5 in rating eight of the students in the control group. Dr. Bent apparently felt that something — the introduction of Grouptalk training, perhaps? — had made assessments of the students at the Underwood School much more difficult.

APPENDIX VI

TEACHER PROBLEMS Q-SORT

This test was designed by Bills, et al. (1964) to measure openness in cooperating teachers. It consists of 84 items, only 39 of which are used as a measure of openness. Since many of the 84 items were expressed in a manner inapplicable to teachers of children in grades 1—3, slight changes were made: all instances of the term 'students' were changed to 'children'. In addition, five items which are involved in the scoring were changed as follows:

#7: Students wanting to be on an equal with teachers
to
Children wanting to decide what to study

#43: Too much emphasis on sports
to
Too much emphasis on play

#47: Too many dropouts
to
Too many truants

#48: Parents who feel that your job is to see that their child passes even though classes are much too large for individual attention
to
Parents who feel that your job is to see that their child progresses even though classes are much too large for individual attention

#79: Some students feel they are different and think they should be treated as teachers are
to
Some children feel they are special and think they should be treated accordingly

APPENDIX VII

RELATIONSHIP BETWEEN CHANGES IN OPENNESS OF STUDENTS AND OF OPENNESS OF THEIR TEACHERS

The Q-sort scores of the student teachers changed on the average towards slightly more openness in the control group (+1.8) and towards slightly less openness in the experimental group (-1.1) as can be seen in Table 16.

TABLE 16. — Relationship between Changes in Openness of Students, Their Initial Openness and Openness of Cooperating Teachers*

	Q-sort scores		
Student	Change in students' openness scores	Students' initial scores	Cooperating teachers' scores
Experimental group			
# 1.....	-11	+25	+22
2.....	-10	+22	+24
3.....	- 8	+38	+ 8
4.....	- 7	+25	+17
5.....	- 5	+23	+22
6.....	- 4	+ 8	+20
7.....	- 3	+15	+14
8.....	+ 1	+14	+12
9.....	+ 6	+23	0
10.....	+30	- 9	+12
Average	- 1.1	+18.4	+15.1
Control group			
#11.....	-18	+32	+20
12.....	- 5	+25	+ 5
13.....	+ 1	+ 6	+21
14.....	+ 1	+27	+21
15.....	+ 1	+ 4	+16
16.....	+ 2	+32	+11
17.....	+ 2	+17	+ 5
18.....	+ 8	+15	+16
19.....	+11	+11	+18
20.....	+15	+27	+ 5
Average	+ 1.8	+15.6	+13.8

*Change is positive is the final score is higher than the initial score.

There does not seem to be any relationship, however, between the initial degree of openness and the size or direction of the change in openness. Nor does there seem to be any relationship between the size of the change and the openness of the cooperating teacher. The major conclusion to be drawn perhaps should be that our sample is too small to make effective use of this type of data.

It is tempting, however, in view of some of the supervisor's and cooperating teachers' qualitative remarks, to wonder whether the Q-sort scores provide valid measures of student emotional maturity and growth. For example, the student with the largest negative change in openness (#11, whose initial score of +32 became +14 after student teaching) is described by Dr. Bent as follows:

> Her performance as a student teacher was excellent (Rating 5). She has excellent teaching potential (Rating 5). My confidence in these ratings is high (Rating 5). The relationship with her cooperating teacher was best among all the student-teacher relationships; there was a great amount of learning and pleasure in their interaction. The classroom supplied rich experiences in discussion and work with small groups.

The cooperating teacher also described her in glowing terms, rated her with great confidence as excellent both as a student teacher and in teaching potential:

> She has shown a high degree of initiative in bringing in from Wheelock many marvelous and relevant materials that have enriched the children's curricular experience.

This same student was excellent according to all of the supervisor's and teacher's initial ratings; her pattern of responses on the Paragraph Completion Test remained unchanged. If the large negative change in openness is meaningful, what is its significance? There is no evidence whatsoever to indicate that the teacher training experience increased her anxiety level, quite the contrary, in fact.